

**RWE Renewables UK Dogger Bank  
South (West) Limited**

**RWE Renewables UK Dogger Bank  
South (East) Limited**

**Dogger Bank South Offshore  
Wind Farms**

**The Applicants' Responses to Deadline 2  
Documents**

|                            |                     |
|----------------------------|---------------------|
| <b>Document Date:</b>      | <b>March 2025</b>   |
| <b>Document Reference:</b> | <b>13.3</b>         |
| <b>Revision Number:</b>    | <b>01</b>           |
| <b>Classification:</b>     | <b>Unrestricted</b> |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                           |                              |                            |            |             |
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| Company:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited | Asset:                       | Development                |            |             |
| Project:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Dogger Bank South Offshore Wind Farms                                                                     | Sub Project/Package          | Consents                   |            |             |
| Document Title or Description:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | The Applicants' Responses to Deadline 2 Documents                                                         |                              |                            |            |             |
| Document Number:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 005648324-01                                                                                              | Contractor Reference Number: | PC2340-RHD-ZZ-ZZ-RP-Z-0200 |            |             |
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| Rev No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Date                                                                                                      | Status/Reason for Issue      | Author                     | Checked by | Approved by |
| 01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | March 2025                                                                                                | Submission for Deadline 3    | RHDHV                      | RWE        | RWE         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                           |                              |                            |            |             |
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## Glossary

| Term                                        | Definition                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Array Area                                  | The DBS East and DBS West offshore Array Areas, where the wind turbines, offshore platforms and array cables would be located. The Array Areas do not include the Offshore Export Cable Corridor or the Inter-Platform Cable Corridor within which no wind turbines are proposed. Each area is referred to separately as an Array Area.              |
| Array cables                                | Offshore cables which link the wind turbines to the Offshore Converter Platform(s).                                                                                                                                                                                                                                                                  |
| Bathymetric                                 | Topography of the seabed.                                                                                                                                                                                                                                                                                                                            |
| Collision                                   | The act or process of colliding (crashing) between two moving objects.                                                                                                                                                                                                                                                                               |
| Cumulative Effects                          | The combined effect of the Projects in combination with the effects of a number of different (defined cumulative) schemes, on the same single receptor / resource.                                                                                                                                                                                   |
| Development Consent Order (DCO)             | An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Project (NSIP).                                                                                                                                                                                                         |
| Dogger Bank South (DBS) Offshore Wind Farms | The collective name for the two Projects, DBS East and DBS West.                                                                                                                                                                                                                                                                                     |
| Effect                                      | Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of the impact with the value, or sensitivity, of the receptor or resource in accordance with defined significance criteria.                                                                                              |
| Electrical Switching Platform               | The Electrical Switching Platform (ESP), if required would be located either within one of the Array Areas (alongside an Offshore Converter Platform (OCP)) or the Export Cable Platform Search Area.                                                                                                                                                |
| Environmental Impact Assessment (EIA)       | A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the EIA Directive and EIA Regulations, including the publication of an Environmental Statement (ES). |
| EIA Regulations                             | The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.                                                                                                                                                                                                                                                                      |

| Term                                                | Definition                                                                                                                                                                                                                                                           |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental Statement (ES)                        | A document reporting the findings of the EIA and produced in accordance with the EIA Directive as transposed into UK law by the EIA Regulations.                                                                                                                     |
| Glacial till                                        | Poorly sorted, non-stratified and unconsolidated sediment carried or deposited by a glacier.                                                                                                                                                                         |
| Gravel                                              | Loose, rounded fragments of rock larger than sand but smaller than cobbles. Sediment larger than 2mm (as classified by the Wentworth scale used in sedimentology).                                                                                                   |
| Habitats Regulations Assessment (HRA)               | The process that determines whether or not a plan or project may have an adverse effect on the integrity of a European Site or European Offshore Marine Site.                                                                                                        |
| Impact                                              | Used to describe a change resulting from an activity via the Projects, i.e. increased suspended sediments / increased noise.                                                                                                                                         |
| Inter-Platform Cables                               | Buried offshore cables which link offshore platforms.                                                                                                                                                                                                                |
| Intertidal                                          | Area on a shore that lies between Mean High Water Springs (MHWS) and Mean Low Water Springs (MLWS).                                                                                                                                                                  |
| Landfall                                            | The point on the coastline at which the Offshore Export Cables are brought onshore, connecting to the onshore cables at the Transition Joint Bay (TJB) above mean high water.                                                                                        |
| National Policy Statement (NPS)                     | A document setting out national policy against which proposals for NSIPs will be assessed and decided upon.                                                                                                                                                          |
| Offshore Development Area                           | The Offshore Development Area for ES encompasses both the DBS East and West Array Areas, the Inter-Platform Cable Corridor, the Offshore Export Cable Corridor, plus the associated Construction Buffer Zones.                                                       |
| Offshore Export Cable Corridor                      | This is the area which will contain the offshore export cables between the Offshore Converter Platforms and Transition Joint Bays at the landfall.                                                                                                                   |
| Offshore Export Cables                              | The cables which would bring electricity from the offshore platforms to the Transition Joint Bays (TJBs).                                                                                                                                                            |
| Preliminary Environmental Information Report (PEIR) | Defined in the EIA Regulations as information referred to in part 1, Schedule 4 (information for inclusion in environmental statements) which has been compiled by the applicants and is reasonably required to assess the environmental effects of the development. |

| Term                                         | Definition                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Principal Contractor                         | A contractor appointed under Regulation 5(1) (b) of the Construction (Design and Management) Regulations 2015. They have control over the construction phase of a project with several contractors.                                                                                                              |
| Project Change Request 1                     | The changes to the DCO application for the Projects set out in <b>Project Change Request 1 - Offshore &amp; Intertidal Works</b> [AS-141] which was accepted into Examination on 21 <sup>st</sup> January 2025.                                                                                                  |
| Projects Design (or Rochdale) Envelope       | A concept that ensures the EIA is based on assessing the realistic worst-case scenario where flexibility or a range of options is sought as part of the consent application.                                                                                                                                     |
| Receptor                                     | A distinct part of the environment on which effects could occur and can be the subject of specific assessments. Examples of Receptors include species (or groups) of animals, plants, people (often categorised further such as 'residential' or those using areas for amenity or recreation), watercourses etc. |
| Sand                                         | Sediment particles, mainly of quartz with a diameter of between 0.063mm and 2mm. Sand is generally classified as fine, medium or coarse.                                                                                                                                                                         |
| Scoping report                               | The report that was produced in order to request a Scoping Opinion from the Secretary of State.                                                                                                                                                                                                                  |
| Scour protection                             | Protective materials to avoid sediment erosion from the base of the wind turbine foundations and offshore substation platform foundations due to water flow.                                                                                                                                                     |
| Sediment                                     | Particulate matter derived from rock, minerals or bioclastic matter.                                                                                                                                                                                                                                             |
| Special Area of Conservation (SAC)           | Strictly protected sites designated pursuant to Article 3 of the Habitats Directive (via the Habitats Regulations) for habitats listed on Annex I and species listed on Annex II of the Directive                                                                                                                |
| Special Protection Area (SPA)                | Strictly protected sites designated pursuant to Article 4 of the Birds Directive (via the Habitats Regulations) for species listed on Annex I of the Directive and for regularly occurring migratory species                                                                                                     |
| Statutory Nature Conservation Bodies (SNCBs) | Comprised of JNCC, Natural Resources Wales, Department of Agriculture, Environment and Rural Affairs/Northern Ireland Environment Agency, Natural England and Scottish Natural Heritage, these agencies provide advice in relation to nature conservation to government                                          |
| Tidal currents                               | The alternating horizontal movement of water associated with the rise and fall of the tide.                                                                                                                                                                                                                      |

| Term           | Definition                                                                                                                                                                                                                                                   |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The Applicants | The Applicants for the Projects are RWE Renewables UK Dogger Bank South (East) Limited and RWE Renewables UK Dogger Bank South (West) Limited. The Applicants are themselves jointly owned by the RWE Group of companies (51% stake) and Masdar (49% stake). |
| The Projects   | DBS East and DBS West (collectively referred to as the Dogger Bank South Offshore Wind Farms).                                                                                                                                                               |
| Wind turbine   | Power generating device that is driven by the kinetic energy of the wind.                                                                                                                                                                                    |

## Acronyms

| Term             | Definition                                            |
|------------------|-------------------------------------------------------|
| AEoI             | Adverse Effects on Integrity                          |
| AEP              | Annual Energy Production                              |
| ANS              | Artificial Nesting Structure                          |
| AoS              | Areas of Search                                       |
| BNHIDB           | Beverley and North Holderness Internal Drainage Board |
| BTO              | British Trust for Ornithology                         |
| CBRA             | Cable Burial Risk Assessment                          |
| CEA              | Cumulative Effects Assessment                         |
| CIMP             | Compensation Implementation and Monitoring Plans      |
| CoCP             | Code of Construction Practice                         |
| COWSC            | Collaboration on Offshore Wind Strategic Compensation |
| dB               | Decibel                                               |
| DBS              | Dogger Bank South                                     |
| DCO              | Development Consent Order                             |
| Defra            | Department for Farming and Rural Affairs              |
| DESNZ            | Department of Energy Security and Net Zero            |
| DML              | Deemed Marine Licence                                 |
| ECC              | Export Cable Corridor                                 |
| EDR              | Effective Deterrent Range                             |
| EGL <sub>2</sub> | Eastern GreenLink 2                                   |
| EIA              | Environmental Impact Assessment                       |
| ES               | Environmental Statement                               |

| Term   | Definition                                     |
|--------|------------------------------------------------|
| ESP    | Electrical Switching Platform                  |
| ExA    | Examining Authority                            |
| FFC    | Flamborough and Filey Coast                    |
| HAT    | Highest Astronomical Tide                      |
| HRA    | Habitats Regulations Assessment                |
| IHLS   | International Herring Larvae Survey            |
| IP     | Interested Party                               |
| IPCoD  | Interim Population Consequences of Disturbance |
| IPMP   | In Principle Monitoring Plan                   |
| JNCC   | Joint Nature Conservation Committee            |
| KCP    | Kittiwake Compensation Plan                    |
| MA     | Monitoring Area                                |
| MarESA | Marine Evidence-based Sensitivity Assessment   |
| MCA    | Maritime and Coastguard Agency                 |
| MCAA   | Marine and Coastal Access Act                  |
| MCZ    | Marine Conservation Zone                       |
| MDS    | Maximum Design Scenario                        |
| MHWS   | Mean High Water Springs                        |
| ML     | Marine License                                 |
| MLWS   | Mean Low Water Springs                         |
| MMMP   | Marine Mammal Mitigation Protocol              |
| MMO    | Marine Management Organisation                 |
| MMObs  | Marine Mammal Observers                        |

| Term      | Definition                                    |
|-----------|-----------------------------------------------|
| MoU       | Memorandum of Understanding                   |
| MRF       | Marine Recovery Fund                          |
| MSL       | Mean Sea Level                                |
| NAS       | Noise Abatement Systems                       |
| NPS       | National Policy Statement                     |
| NSIP      | Nationally Significant Infrastructure Project |
| NSSS      | North Sea Sandeel Survey                      |
| OCoCP     | Outline Code of Construction Practice         |
| OD        | Outer Dowsing                                 |
| OECC      | Offshore Export Cable Corridor                |
| OFTO      | Offshore Transmission Operator                |
| OWF       | Offshore Wind Farm                            |
| OWIC      | Offshore Wind Industry Council                |
| PA        | Planning Act                                  |
| PAM       | Passive Acoustic Monitoring                   |
| PEIR      | Preliminary Environmental Information Report  |
| PINS      | The Planning Inspectorate                     |
| PSA       | Particle Size Analysis                        |
| PTS       | Permanent Threshold Shift                     |
| PVA       | Population Viability Analyses                 |
| RIAA      | Report to Inform Appropriate Assessment       |
| SAC       | Special Area of Conservation                  |
| SEP & DEP | Sheringham & Dudgeon Extensions Projects      |

| Term  | Definition                           |
|-------|--------------------------------------|
| SIP   | Site Integrity Plan                  |
| SNCBs | Statutory Nature Conservation Bodies |
| SNS   | Southern North Sea                   |
| SoS   | Secretary of State                   |
| SSC   | Suspended Sediment Concentrations    |
| SoS   | Secretary of State                   |
| TH    | Trinity House                        |
| PTS   | Permanent Threshold Shift            |
| TTS   | Temporary Threshold Shift            |
| UK    | United Kingdom                       |
| UKHO  | UK Hydrographic Office               |
| UWN   | Underwater Noise                     |
| UXO   | Unexploded Ordnance                  |
| VMS   | Vessel Monitoring Systems data       |
| ZoI   | Zone of Influence                    |

# 1 Introduction

1. This document presents the Applicants' responses to Deadline 2 documents received from Interested Parties (IPs) following submissions to the Examining Authority at Deadline 2 of the Dogger Bank South Examination, and to late submissions from Natural England.
2. For ease of referencing and to facilitate future cross-referencing, the Applicants have used the existing Planning Inspectorate reference (e.g. REP1-001) and created a unique identifier for each response by itemising the document into paragraphs or sections (e.g. REP1-001:1.1). The ID numbers can be found in the first column of each table.

## 2 Responses to Deadline 2 Documents

3. The Applicants' responses to documents received from IPs at Deadline 1 are provided in this section.

## 2.1 Beverley & North Holderness Internal Drainage Board

Table 2-1 The Applicants' Response to Beverley & North Holderness Internal Drainage Board's Deadline 2 Documents [REP2-070]

| I.D.     | Beverley & North Holderness Internal Drainage Board Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REP2-070 | <p>The Board notes the changes to the draft Development Consent Order – Revision 5 – submitted at Deadline 1 – January 2025.</p> <p>In respect Part 4 of Schedule 15 – “Protective Provisions”, the Board accept the changes to the definition of ‘specified work’ strictly on the basis that the addition of the word ‘including’ does not preclude any other works in this definition.</p> <p>It remains, however, the Beverley and North Holderness IDB position is that we seek trenchless crossings unless otherwise agreed with the Board. I have checked earlier correspondence and this is consistent with the requests of Mr J Church, the Boards previous Engineer. I accept that Mr J Church highlighted concerns on actually carrying out the works open cut which the applicant has proposed mitigation - the significant concern beyond the installation is disturbing established banks creating a potential weakness zone for slipping when the banks are reinstated. The Boards maintenance practice following a slip is driving long usually spiked timber piles to withhold supporting backing boards. The work being designed to regain the bank stability. This operation clearly would not be desirable or appropriate in these locations with the cables and protection installed.</p> <p>The Board wants the above noting formally now but appreciate this will be dealt with directly by the applicant in due course.</p> | <p>The Applicants note, the updated Protective Provisions in Part 4 of Schedule 15 of the <b>Draft Development Consent Order (DCO) (Revision 6)</b> [document reference: 3.1] have been accepted and do not consider that the word ‘including’ would preclude any other works in this definition.</p> <p>The Applicants wish to thank the Beverley and North Holderness Internal Drainage Board (BNHIDB) for their response at Deadline 2 and Mr Jon Church’s attendance at the Environmental Technical Group meetings last year. As stated in our response at Deadline 1 (<b>The Applicants' response on Beverley &amp; North Holderness Internal Drainage Board Additional Submission</b> [REP1-052]), comments raised by Mr J Church relating to potential issues with over pumping and adverse weather conditions were mitigated in section 6.3.2.6 of the <b>Outline Code of Construction Practice (OCoCP) (Revision 3)</b> [REP1-025]. Potential issues relating to reinstatement and bank stabilisation were not raised prior to the submission of the DCO application. The Applicants have now considered these recent comments further and will still seek to include both open cut and trenchless crossing options for ordinary watercourses, as per <b>Appendix 5-2 Obstacle Crossing Register (Revision 3)</b> [REP2-014]. Please note, as per <b>Figure 20-6 Watercourse Crossings (Main Rivers and ordinary watercourses)</b> [APP-164] and the <b>Appendix 5-2 Obstacle Crossing Register (Revision 3)</b> [REP2-014], there are a total of 29 watercourse crossings in the BNHIDB catchment area which are not managed by the Environment Agency and four are committed to a trenchless crossing technique. However, only Wx-042 is identified as a BNHIDB maintained drain on Figure 20-6. There are also 14 locations where the option for open cut or trenchless crossing is included, however as above only four of these watercourses are identified as BNHIDB maintained drains. As detailed in the drainage authority protective provisions in Part 4 of Schedule 15 of the <b>Draft DCO (Revision 6)</b> [document reference: 3.1] and section 5.15 of the <b>OCoCP (Revision 3)</b> [REP1-025] a ‘crossing method statement’ must be agreed with the relevant drainage authority. If an open cut method is proposed by the Contractor this would also include how the bank would be reinstated and stabilised. Although wooden piles are one option to stabilise a bank, there are other options available which may have a longer design life and be suitable, without impacting the buried cable ducts and cables. The Contractor will undertake a full risk assessment of the crossing and develop a method statement based on the ground conditions, reinstatement options and the time of year. An open cut method will not be proposed if it is not considered suitable, at the detailed design stage. The Applicants would also like to confirm that they would be responsible for the reinstatement of the bank should it require further work following the construction phase, should it be related to the Projects. Any future repair work during the operational phase would need to be agreed with both the relevant drainage authority and the Offshore Transmission Operator. Given the protection provided in the <b>Draft DCO (Revision 6)</b> [document reference: 3.1] and the requirement to agree a crossing method statement the Applicants do not propose to make any changes. The Applicants would be happy to meet with the BNHIDB to discuss ahead of the Onshore Issue Specific Hearing on the 9<sup>th</sup> April, if a suitable time could be arranged.</p> |

## 2.2 DBABC Projcos

Table 2-2 The Applicants' Response to DBABC Projcos Deadline 2 Documents [REP2-071]

| I.D.       | DBABC Projcos Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REP2-071:1 | <b>INTRODUCTION</b><br>Dogger Bank Offshore Wind Farm Project 1 Projco Limited ( <b>DBA Projco</b> ) is a statutory undertaker for the purposes of the Planning Act 2008. DBA Projco has the benefit of development consent for the Dogger Bank A Offshore Wind Farm ( <b>DBA</b> ) which was granted pursuant to The Dogger Bank Creyke Beck Offshore Wind Farm Order 2015 as amended (the <b>DBA/DBB DCO</b> ).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No response is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| REP2-071:2 | Dogger Bank Offshore Wind Farm Project 2 Projco Limited ( <b>DBB Projco</b> ) is a statutory undertaker for the purposes of the Planning Act 2008. DBB Projco has the benefit of development consent for the Dogger Bank B Offshore Wind Farm ( <b>DBB</b> ) which was granted pursuant to the DBA/DBB DCO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No response is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| REP2-071:3 | Dogger Bank Offshore Wind Farm Project 3 Projco Limited ( <b>DBC Projco</b> ) is a statutory undertaker for the purposes of the Planning Act 2008. DBC Projco has the benefit of development consent for the Dogger Bank C Offshore Wind Farm ( <b>DBC</b> ) which was granted pursuant to The Dogger Bank Teesside A and B Offshore Wind Farm Order 2015 as amended (the <b>DBC DCO</b> ).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No response is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| REP2-071:4 | DBA, DBB and DBC are due to commence commercial operation between 2025 and 2027 and so will be operational before construction of the Dogger Bank South ( <b>DBS</b> ) Projects commence.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No response is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| REP2-071:5 | DBA Projco, DBB Projco and DBC Projco (together the <b>Projcos</b> ) do not object in principle to the DBS Projects but are making this submission in respect of the Applicant's approach to wake loss in respect of DBA, DBB and DBC and the interaction with the DBA and DBB order limits. This submission builds off of the Projcos' relevant representation (RR-007) and Deadline 1 submission (REP1-071) and follows the Projcos' position as stated at Issue Specific Hearing 2 ( <b>ISH2</b> ) held on 16 January 2025.                                                                                                                                                                                                                                                                                                                                                                                                                       | The Applicants are pleased to note that the Projcos do not object in principle to the Projects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| REP2-071:6 | The Applicant's position presented on wake loss at ISH2 was not credible and represented a substantive change in position in respect of wake loss from that presented throughout the pre-application process and the DCO application materials (including the Environmental Statement). This gives rise to concerns around legitimate expectation and procedural fairness. These concerns were set out in the Projcos' Deadline 1 submission, but these concerns have been compounded by the materials submitted by the Applicant at Deadline 1, notably:<br>(a) The Applicant's Written Summaries of Oral Submissions made at CAH1, ISH1 and ISH2 (REP1-049);<br>(b) The Applicant's Responses to Issue Specific Hearing 2 (ISH2) Supplementary Agenda Questions (REP1-050);<br>(c) The Applicant's Responses to January 2025 Hearing Action Points (REP1-051); and<br>(d) The updated draft of Chapter 16 of the Environmental Statement (AS-010). | The Applicants have already addressed the points around 'legitimate expectation' at REP2-58 (at IDREP01-071:5 at page 24). The Applicants have, indeed, changed their position on wake loss. This took place at the start of the Examination and the Projcos have a full opportunity to address the revised position, which they have done in their Written Representation [REP1-071] and prior submissions. Given that the Written Representation stage is the procedural stage under the Examination Rules at which an Interested Party has the opportunity to put its full case, the Applicants do not accept that the Projcos have suffered in procedural terms. |
| REP2-071:7 | Therefore, we have set out a fuller response as part of this response to the Applicant's submissions at Deadline 1 to assist the examination. We reserve our right to respond to any submissions made by the Applicant at Deadline 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | The Applicants acknowledge this comment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| I.D.        | DBABC Projcos Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Applicants' Response                                                                                                                                       |
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| REP2-071:8  | We also note that the Applicant did not engage with this matter effectively at the ISH2. It has now submitted written responses to the agenda items. This is necessitating more time being spent on this matter than should have been necessary on behalf of the Projcos with associated time and costs consequences.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | The Applicants are not proposing to respond in detail to these 'costs' types of points. See REP2-071:44 below.                                             |
| REP2-071:9  | <b>WAKE LOSS</b><br>The key focus of the Projcos' representations is on the potential effects on Annual Energy Production (AEP) and viability of other offshore wind farms (being DBA, DBB and DBC) which are within the vicinity of the DBS Projects. The Projcos' position remains that a specific assessment of the effect on AEP by the DBS Projects is required and that this should be provided to: 1) the Projcos to allow them to understand the impacts on their infrastructure; and 2) the Examining Authority and Secretary of State so that they can adequately discharge their duties under the EIA Regulations and the NPS. This information has been requested by the Projcos but has not been provided by the Applicant.                                                                                                                                                           | The Applicants acknowledge this comment.                                                                                                                   |
| REP2-071:10 | <b>WAKE LOSS: THE APPLICANT'S POLICY INTERPETATION</b><br>The Applicant presents its policy analysis as if it is made in relation to a new issue. This has led to the Applicant changing its position at the outset of the examination of the application in spite of there being no material change in circumstances. It is important to contextualise this.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | The Applicants are responding to this section of the Projcos Deadline 2 Submission at REP2-071:14 below, rather than responding to each paragraph in turn. |
| REP2-071:11 | This is not a new issue; it has been known to the Applicant throughout the pre-application and pre-examination stage when the Applicant was preparing environmental information, liaising with the Projcos, responding to consultation materials, and preparing its DCO application submission and accompanying documentation on the basis that a wake loss assessment would be undertaken. However, in spite of this, the Applicant waited for the commencement of the examination and ISH2 to adopt its new position on wake loss, albeit that position was not clearly explained at ISH2 given the Applicant's resistance to address this and its stated intention to wait for written questions to address this.                                                                                                                                                                               | The Applicants are responding to this section of the Projcos Deadline 2 Submission at REP2-071:14 below, rather than responding to each paragraph in turn. |
| REP2-071:12 | Unfortunately, this has created numerous process issues in terms of consultation, environmental assessment and policy which, if not addressed through the examination and in the Secretary of State's decision, will give rise to grounds for legal challenge. These are set out in this response.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | The Applicants are responding to this section of the Projcos Deadline 2 Submission at REP2-071:14 below, rather than responding to each paragraph in turn. |
| REP2-071:13 | Having reviewed the extensive material submitted by the Applicant at Deadline 1, it is clear that there is no justification for the Applicant's policy position. The Applicant proceeds on a "hope" that the Secretary of State will not follow the precedent of a previous decision from June 2023. The Applicant adopts this position in spite of:<br><br>(a) the previous Government having adopted new national policy statements including NPS EN-3 in January 2024 which did not address this issue in the manner that the Applicant would hope;<br><br>(b) the current Government having issued a significant document (the Clean Power 2030 Action Plan) in December 2024 which expressly recognises the precedent set in the Awel y Mor DCO and makes no comment on: 1) Awel y Mor being "bad" precedent; or 2) an alternative interpretation to NPS EN-3; or 3); a change in policy; and | The Applicants are responding to this section of the Projcos Deadline 2 Submission at REP2-071:14 below, rather than responding to each paragraph in turn. |

| I.D.        | DBABC Projcos Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|             | (c) the current Government identifying within the Clean Power 2030 Action Plan that new projects (such as the Project) have “ <i>even greater propensity to cause wake effects on existing downstream operational projects</i> ”. This is a recognition by the current Government that wake loss is even more significant than historically and reflects the fact that there are now a significant number of offshore wind farms (such as DBA, DBB and DBC) which are high value receptors for new projects to consider.                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| REP2-071:14 | The Applicant then proceeds to explain that if its “hope” is wrong the Secretary of State should proceed to take a pragmatic approach, which would be not to require a wake loss assessment. Notwithstanding the continued commitment by the Applicant to undertaking a wake loss assessment at the pre-application stage and in its application materials, this simply avoids the issue. The Applicant has provided no justification as to why the Secretary of State should, or indeed could, adopt this position and how this would be procedurally fair given the Applicant’s position throughout the pre-application stage. | <p>The Applicants have explained the relative timing of the Awel y Mor decision and the final stage of the process for adoption of the new National Policy Statements (NPSs). It is clear that there was no realistic opportunity for concerns over the Awel y Mor outcome to be expressed by offshore developers or to be taken into account by the Department for Energy Security and Net Zero (DESNZ).</p> <p>The wake loss assessment requirement in Awel y Mor was imposed without consultation by the Secretary of State (SoS). The SoS adopted recommended drafting from the ExA’s report which had not been consulted on during the Examination. There was very limited consideration in the Awel y Mor Examination of the range of technical and policy issues which would be raised by imposing such a requirement.</p> <p>The Clean Power 2030 Action Plan refers to the Awel y Mor Development Consent Order (DCO) wake loss requirement in a neutral, factual way. It simply explains what happened. It also acknowledges that wake loss requires further consideration and that a specialist group is going to look at it.</p> <p>The Projcos will be aware that DESNZ has been holding a series of industry meetings with the developers on both sides of the wake loss issue in recent weeks, in the light of the considerable attention which wake loss has received in recent and ongoing Examinations.</p> <p>In these circumstances, it is perfectly reasonable for the Applicants to invite the new SoS to reconsider the approach adopted in the Awel y Mor decision. There is more than one way in which this could take place.</p> <p>If, however, the SoS applies the policies on ‘other offshore infrastructure and activities’ to offshore wind farm projects, then they are directed by para 2.8.342 of NPS EN-3 to take a pragmatic approach in relation to the potential effects of an offshore wind farm project on other offshore infrastructure. The Applicants have already made submissions on this at REP2-058 (page 19), which are developed further below.</p> <p>As previously noted, the pragmatism applied by the SoS will necessarily vary depend on the class of infrastructure it is being applied to.</p> <p>This is particularly important in relation to projects within the same asset class, where special considerations plainly apply. In particular, there is already a sophisticated quasi-regulator (The Crown Estate, which works with DESNZ on the design of new seabed licensing rounds) setting the parameters for the location of new projects in relation to existing or emerging ones.</p> <p>These parameters included specifying a buffer distance to take account of wake effects and other considerations. The Applicants complied with The Crown Estate’s (TCE) buffer distance for Round 4 of 7.5km, which is a fundamental point in front of this Examination. This buffer had been increased from the 5km which was used for the 2017 Extensions round.</p> <p>The Applicants highlight that para 2.8.2 of NPS EN-3 urges developers to maximise offshore wind project capacity within the technological, environmental, and other constraints of the project. This is a fundamental point. To date, all offshore wind projects have been designed to maximise their Annual Energy Production</p> |

| I.D.        | DBABC Projcos Response                                                                                                                                                                                                                                                                                                                                                                                                                            | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>(AEP) to make the greatest contribution to government renewable energy targets. A departure from this approach would need the most careful consideration.</p> <p>NPS EN-3 also expressly recognises that new offshore wind development will take place in or close to areas where there is other offshore infrastructure (para 2.8.196 and 2.8.197) and that there is potential for adverse impacts on those activities as a result.</p> <p>TCE's Round 4 separation criteria, as referenced above, are also important in considering the correct application of paragraphs 2.8.197 and 2.8.198 of NPS EN-3. As already noted, TCE has a key role in the offshore wind industry as the authority responsible for leasing rounds. TCE has a strategic role to play in the development of the industry, part of which is implemented through the criteria that it imposes for each leasing round. NPS EN-3 should be read in light of that wider strategic context, and the exercise already undertaken by TCE in assessing what separation distance was acceptable for Round 4 projects. As noted in IOU 1.3 of <b>The Applicants' Responses to ExQ1</b> [document reference: 13.2], TCE conducted extensive consultation with the offshore wind sector when designing Round 4, including the buffer distance (<b>Offshore Wind Leasing Round 4 – Bidders Information Day: Q&amp;A Summary</b> [document reference: 3.10]).</p> <p>Whilst paragraph 2.8.197 of NPS EN-3 refers to an assessment of potential effects on existing infrastructure, paragraph 2.8.198 specifies that such an assessment should be undertaken 'in accordance with the appropriate policy and guidance for offshore wind farm EIAs.' In the case of wake effects, the Applicant is not aware of any policy or guidance which requires such an assessment to be carried out as part of offshore wind farm EIAs, or how an assessment ought to be undertaken. As already noted wake effects assessments have never been included in EIAs and the Applicants' position is that they are outside the scope of the EIA Regulations.</p> <p>A pragmatic approach would also take account of whether any mitigation is, in fact, available to reduce the wake effects on an existing project without having a disproportionate effect on the new project. It would also take account of the absence of any consultation or policy guidance on how the competing interests of the projects in question should be balanced when there is no legal right to 'clean' wind and the entire offshore wind industry has proceeded for years on a particular basis (acceptance of the TCE buffer distances) which a group of developers has now decided to challenge.</p> |
| REP2-071:15 | Even if the Applicant were right on the NPS (which it is not) it would have to adopt a position that wake loss is not a material consideration in this decision at all. This is clearly not the case, and, even if the Applicant were right on the NPS, wake loss would still be capable of being an adverse effect which would factor into the decision-making process and weigh into the balance under section 104(8) of the Planning Act 2008. | <p>EN-1 (paragraph 5.1.2) makes it clear that the impacts considered in EN-1 and EN-3 are not exhaustive and are not intended to provide a list of all possible effects or ways to mitigate such effects. The Applicants accept that it is always open to the Secretary of State to conclude that there is an impact which is "relevant and important" and to have regard to it under section 104(2)(d). This point is expressly referenced in paragraph 5.1.2.</p> <p>It is open to the Projcos to make the case for a "relevant and important" matter in relation to wake effects, as this comment indicates they are doing as a back stop to their main case on the interpretation of EN-3 and the EIA Regulations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| REP2-071:16 | Ultimately, this is the Applicant's risk to adopt in its DCO application.                                                                                                                                                                                                                                                                                                                                                                         | See response to REP2-071:15.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| REP2-071:17 | <p><b>AWELY MOR</b></p> <p>The Awel y Mor decision which the Applicant challenges was made on 20 September 2023, before the current NPSs were adopted. As noted above, if the intention had been to make a change to the policy as it</p>                                                                                                                                                                                                         | See response to REP2-071:18.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| I.D.        | DBABC Projcos Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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|             | had been applied in that decision then it would have been undertaken when the NPSs were subsequently designated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| REP2-071:18 | The Applicant is, as pointed out in ISH2, controlled by the same ultimate entity as the entity which secured the Awel y Mor decision. It is important to note that, in spite of the Applicant's protestations around that decision, no legal challenge to the inclusion of the requirement in the Awel y Mor DCO was made and no application for a material change (or a non-material change) has subsequently been submitted to remove the requirement from the Awel y Mor DCO. The correct place to have challenged the Secretary of State's policy interpretation would have been through that decision.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>The ownership of Awel y Mor and the Projects is different, although they have one common shareholder. It is completely inappropriate to suggest that because the Awel y Mor project has not taken a public step in relation to the requirement which was imposed that should limit the Applicants ability (with a common shareholder) to raise concerns about the approach adopted by the SoS.</p> <p>It is perfectly reasonable for other developers to hold and express a view on the approach adopted in Awel y Mor. As the Projcos will be aware, this has taken place on multiple other Examinations.</p>                                                                                                                                                                                                                                                                                                                                                                                                  |
| REP2-071:19 | <p><b>CLOSENESS</b></p> <p>The Applicant has now asserted that the Project is not close to DBA (and, we assume by reference, DBB and DBC). This is in spite of previous documentation referring to the Project as being in "close proximity" to DBA. No evidence is provided to support this further change in position.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | The interpretation of the word "close" depends on the context. In this case it is a NPS policy context, where the fact that the Projects have respected TCE's buffer is highly relevant to the interpretation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| REP2-071:20 | <p><b>EIA PROCESS</b></p> <p>In respect of the Applicant's approach to the environmental statement and the EIA Regulations, this is confused and confusing. Again, a timeline here is helpful:</p> <p>(a) operational impacts on offshore wind infrastructure were scoped in by the Applicant in their own scoping report. Sections 2.13.3.1 and 2.13.3.2 of its Scoping Report clearly identify impacts on other wind farms and scope them in (and do so separately to subsea cables, which are identified as a separate impact). This is then set out in Table 2-38;</p> <p>(b) the PEIR identified wake loss as an environmental impact of the Projects;</p> <p>(c) within the Consultation Report that followed the PEIR, it was confirmed that potential impacts regarding wake loss are assessed in section 16.6.1.1 of the ES;</p> <p>(d) within the first iteration of the Environmental Statement, there was a purported assessment of wake loss; and</p> <p>(e) the Projcos have consistently raised in the pre-application and pre-examination stage the need for wake loss to be adequately assessed.</p> | The Applicants have set out the legal basis for the inclusion of Chapter 16 in response to IOU1.2 in <b>The Applicants' Responses to ExQ1</b> [document reference: 13.2] which was submitted at Deadline 3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| REP2-071:21 | The EIA process is, of course, separate from the NPS. It applies to environmental effects, regardless of whether there is a specific policy within the NPS that applies to those environmental effects or not. Impacts on offshore wind infrastructure were rightly scoped in, and offshore wind infrastructure is a receptor which is capable of being subject to a significant effect as a high value receptor. This is not contingent on an interpretation of NPS EN-3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>It is plain from Regulation 5 of the EIA Regulations that impacts on other offshore infrastructure do not engage any of the factors listed. As explained at IOU 1.2 in <b>The Applicants' Responses to ExQ1</b> [document reference: 13.2] the only reason Chapter 16 of the ES was included was because the Applicants chose to include it in the scoping report following custom and practice. The Applicant agrees that "potential interference with other wind farms" was included in the scoping report.</p> <p>The point – which the Projcos understand well as experienced offshore wind developers - is that wake effects have never been included in offshore wind environmental statements before and have been generally accepted as being outside the scope of this type of assessment.</p> <p>If wake effects assessments were required in environmental statements there would be multiple examples to point to. There are none. There would be guidance on their preparation. There is none.</p> |

| I.D.        | DBABC Projcos Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Applicants' Response                                                                                                                                                                                                                                                                                                                        |
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|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | The Applicants do not accept that a point of legal challenge arises.                                                                                                                                                                                                                                                                        |
| REP2-071:22 | Unfortunately, the Applicant appears to have allowed its hopeful interpretation of policy within NPS EN-3 to infiltrate its EIA process. We raise this now so that it can be addressed in the examination and does not give rise to a ground of legal challenge.                                                                                                                                                                                                                                                                        | See the response to REP2-071:21                                                                                                                                                                                                                                                                                                             |
| REP2-071:23 | The Applicant had not gone beyond the EIA Regulations in assessing wake loss as it has sought to assert in its Deadline 1 submission. The Applicant has now compounded the errors in its assessment process that the Projcos had previously raised by removing wake loss from its environmental statement. As a consequence, the environmental statement now fails to comply with Regulation 14(3)(a) and Regulation 14(3)(b) of the EIA Regulations. This will give rise to a ground of legal challenge if not addressed.              | See the response to REP2-071:21                                                                                                                                                                                                                                                                                                             |
| REP2-071:24 | Regulation 14(3)(a) of the EIA Regulations provides that the environmental statement <u>must</u> , where a scoping opinion has been adopted, be based on the most recent scoping opinion adopted (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion). As noted above, impacts on offshore wind infrastructure were scoped in. The effect of the exclusion of the assessment is that this duty is not complied with.                                          | See the response to REP2-071:21                                                                                                                                                                                                                                                                                                             |
| REP2-071:25 | Regulation 14(3)(b) of the EIA Regulations provides that the environmental statement <u>must</u> include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment. The effect of the exclusion of the assessment, and the previously flawed approach to the assessment raised in the Projcos' Relevant Representation, is that this duty is not complied with.                          | The Applicants disagree. If this were the case then there would be many examples of wake loss assessments included in offshore wind environmental statements by now and there would be an established methodology for preparing them in this context. This is simply not the case.                                                          |
| REP2-071:26 | Under Regulation 21 of the EIA Regulations, when deciding whether to make an order granting development consent for EIA development the Secretary of State <u>must</u> (amongst other things):<br><br>(a) examine the environmental information; and<br><br>(b) reach a reasoned conclusion on the significant effects of the proposed development on the environment, taking into account the examination referred to in sub-paragraph (a) and, where appropriate, any supplementary examination considered necessary.                 | See response to REP2-071:25.                                                                                                                                                                                                                                                                                                                |
| REP2-071:27 | The Secretary of State is now in a situation whereby it cannot discharge this duty which it must comply with in decision making.                                                                                                                                                                                                                                                                                                                                                                                                        | The Applicants disagree for the reasons explained above.                                                                                                                                                                                                                                                                                    |
| REP2-071:28 | Therefore, we request that the ExA exercise their power under Regulation 20 of the EIA Regs to request further information.                                                                                                                                                                                                                                                                                                                                                                                                             | The Applicants do not consider such a request would be appropriate. As already stated, if wake effects assessments were within the scope of environmental statements for offshore wind, then this would be regular practice. That is not the case and for good reason – namely such assessments go beyond the ambit of the EIA Regulations. |
| REP2-071:29 | This is particularly important, as the Applicant's refusal to engage and its changing position on this matter casts significant doubt on the reliability of the assessment that was previously purported to have been undertaken for DBA (and which was absent in respect of DBB and DBC). However, there is currently no evidence in front of the examination to allow a conclusion on this matter. To support the examination, the Projcos have committed to commissioning and submitting an assessment. However, that can only go so | The Applicants have withdrawn all references to the assessment which was referenced in Chapter 16 of the environmental statement. For the reasons the Applicants have explained the environmental statement is not deficient with the absence of a wake assessment. It is up to the Projcos whether they choose to submit an assessment.    |

| I.D.        | DBABC Projcos Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|             | far in assisting the examination and it cannot remedy the defects identified in the environmental statement.                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| REP2-071:30 | <b>EIA PROCESS - BENEFITS OF THE PROJECT</b><br>The Applicant's position on the benefits of the Project must be treated with caution.                                                                                                                                                                                                                                                                                                                                                                                 | This issue is addressed in the Applicants' response to IOU1.8 in <b>The Applicants' Responses to ExQ1</b> [document reference: 13.2].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| REP2-071:31 | At this stage, the contribution of the Project to renewable energy generation cannot be accurately identified or assessed without an assessment of the consequent downstream loss of renewable energy generation caused to DBA, DBB and DBC by the Project. The failure to undertake an assessment of the wake impacts of the Project has a direct impact on this assessment.                                                                                                                                         | See response to REP2-071:30.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| REP2-071:32 | This is also relevant from an EIA perspective. The Environmental Statement Volume 7 Chapter 30 – Climate Change (APP-222) does not currently undertake an assessment of wake loss. It is relevant to note that the Examining Authority in respect of the Morecambe Offshore Windfarm Generation Assets DCO examination requested, at ISH2, that the Greenhouse Gas Assessment is updated to include consideration of wake loss (EV7-006 at Action 20).                                                                | See response to REP2-071:30.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| REP2-071:33 | Therefore, we request that the ExA similarly requests that Chapter 30 of the Environmental Statement is updated to consider the impacts of wake loss on other projects, including DBA, DBB and DBC.                                                                                                                                                                                                                                                                                                                   | See response to REP2-071:30.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| REP2-071:34 | <b>CONSULTATION</b><br>The Applicant is under a legal duty to have regard to consultation under section 49 of the Planning Act 2008. When submitting its application, it was able to discharge this duty in respect of the Projcos' representations. However, its changed approach following acceptance of the application demonstrates that this regard may well have been superficial and/or misleading.                                                                                                            | The Applicants did have regard to the Projcos Preliminary Environmental Information Report (PEIR) consultation reply.<br><br>As they have explained, they have revised their position in relation to the need to conduct a wake effects assessment. Their fundamental position continues to be the long-standing industry position (prior to Awel y Mor) namely that, having respected The Crown Estate's buffer distance that the question of wake effects would not require further consideration by the Applicants.                                                                                                                                                                                                                                                                                                                                                                                                     |
| REP2-071:35 | <b>THE CROWN ESTATE</b><br>The Applicant's position is that the question of how close offshore wind farms should be to each other (without the specific agreement of the existing project) as regards wake effects and other matters is a judgement call for The Crown Estate (TCE) through the leasing process. This is correct in part in that TCE do consider wake effects (amongst numerous other matters) in setting a buffer distance, but this does not address the question of project specific wake effects. | The Crown Estate buffer distance does, in practice, address project specific wake effects. Where a specific project was proposed within the relevant buffer distance then it could only proceed with the agreement of the existing project. Such agreements have always been confidential and would have addressed the specific wake effects arising from the proximity of the proposed project to the new project.<br><br>Where a new project was proposed outside the buffer distance, then the project specific wake effects of the proposed project (along with other matters) have been taken into account, by respecting that buffer. The fixing of the buffer distance has always been made in the knowledge that there may be wake effects beyond the buffer. Such projects have then been designed, in the usual way, to maximise AEP, without further consideration of the wake effects on the existing project. |
| REP2-071:36 | The Projcos' position on this was clearly set out in its Deadline 1 submission. In the Outer Dowsing submission at Appendix 1 of that submission, TCE very clearly acknowledge that inter-farm wake effects can extend beyond these buffer distances.                                                                                                                                                                                                                                                                 | See response to REP2-071:37.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| REP2-071:37 | The Applicant's position is that there should continue to be a TCE-led approach outside the planning system. This does not address the issue, as TCE does not undertake a project specific assessment and TCE has not undertaken any work to assess the impacts of the final design of this Project on DBA, DBB or DBC.                                                                                                                                                                                               | The Applicants submit that it does address the issue and this was generally accepted as addressing the issue by the industry for each new leasing round.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| I.D.        | DBABC Projcos Response                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | When preparing Round 4, TCE engaged in a formal and informal process of consulting on the key features of the proposed round. See response to REP2-071:35 and the detail and commentary in the Applicants' response to IOU1.3 in <b>The Applicants' Responses to ExQ1</b> [document reference: 13.2].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| REP2-071:38 | <b>FRAZER NASH</b><br>The Applicant's response at ISH2.2.2 demonstrates the issue in relying on the Frazer Nash report. The Frazer Nash report cannot be relied upon as a project specific assessment of the implications of this Project as it is a generic assessment, and the Applicant seeks to respond with a technical response but without any project specific assessment in respect of DBA, DBB or DBC. This does not assist the examination of this Project. | The Applicants agree that the Frazer Nash report is not project specific.<br>The Applicants have made their position on a project specific wake assessment clear.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| REP2-071:39 | <b>RESOLUTION OUTSIDE OF THE PLANNING SYSTEM</b><br>The Applicant makes various references to the intention that wake loss is resolved outside of the planning system. Whilst this is not accepted, it is also telling that the Applicant has not made any attempt to resolve this issue outside of the planning system.                                                                                                                                               | The Applicants' position is that the Secretary of State needs to remove this issue from the planning system. This can be achieved by reverting to the prior interpretation of the 'other offshore infrastructure' language in EN-3 and its predecessor NPS and concluding under EN-1 paragraph 5.1.2 that wake effects are not relevant and important for DCO decision making (because they have been resolved by the TCE seabed licensing system). Alternatively, the Secretary of State can – in effect – remove the issue from the planning system by applying EN-3 in the pragmatic way specified in paragraph 2.8.342 of EN-3, so as to accept that the TCE buffer mechanism and other considerations do not require wake assessments or the imposition of requirements to seek mitigation of wake effects.<br>The Applicants have simply pursued the normal approach of bidding into a leasing round and being successfully awarded two projects, outside TCE's buffer area laid down as part of that process. The Applicants have subsequently promoted those projects in the normal way, which is to maximise AEP subject to project-specific constraints. Taking account of wake effects on other projects (aside from where a project is within a TCE buffer) are not part of that development process.<br>There is no legal right to 'clean' wind. If a new system to control or mitigate exposure to wake effects of new projects (beyond the TCE buffer mechanism) is to be introduced, this would raise a whole range of policy and technical issues as highlighted in REP2-058 (REP01-071:2 from bottom of page 17). If this is to happen, it should be developed by DESNZ outside the planning system. This would require careful consideration and detailed consultation with the offshore wind sector and TCE. |
| REP2-071:40 | Throughout the pre-application process, attempts to address and resolve this issue have been driven by the Projcos. As the examination was informed at ISH2, the Applicant will not engage with the Projcos on this matter.                                                                                                                                                                                                                                            | The Applicants have a different view of the issues from the Projcos. The Applicants consider that we are in 'agree to disagree' territory, given that they do not share the Projcos ultimate objective of entering into agreements to regulate wake loss between the projects. The Applicants are following the normal approach for new projects outside the relevant TCE buffer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| REP2-071:41 | In the absence of any industry agreed approach, the onus is on the Applicant to resolve this.                                                                                                                                                                                                                                                                                                                                                                          | See response to REP2-071:40.<br>In addition, the other obvious solution is for the Projcos to withdraw their representations on the wake effects issue and accept that the Applicants have simply promoted the Projects on exactly the same basis that they themselves (or any experienced developer) would have done if they had bid successfully into Round 4. Namely, by respecting TCE's 7.5km buffer and without further regard to wake effects on other projects, so as to maximise project AEP and the aggregate contribution towards government targets.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| I.D.        | DBABC Projcos Response                                                                                                                                                                                                                                                                                                                                                                                                                                           | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| REP2-071:42 | <b>REQUIREMENT AND INDEMNIFICATION</b><br><p>To date, the Projcos have not raised the prospect of indemnification through the DCO as the Projcos had expected there to be engagement from the Applicant on wake loss as committed to throughout the pre-application process. The Projcos note that the Applicant raised the prospect of such a requirement at ISH2 and in The Applicants' Written Summaries of Oral Submissions made at CAH1, ISH1 and ISH2.</p> | The Applicants have already made it clear that indemnification or financial compensation is not appropriate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| REP2-071:43 | The Projcos reserve their right to comment on the need for and wording of such a requirement in due course given the absence of an assessment by the Applicants.                                                                                                                                                                                                                                                                                                 | The Applicants acknowledge this comment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| REP2-071:44 | <b>COSTS</b><br><p>We note that the ExA has the ability to award costs pursuant to section 90(4) of the Planning Act 2008, and the ExA may make orders for costs pursuant to section 250 of the Local Government Act 1972.</p>                                                                                                                                                                                                                                   | It is matter for the Projcos to decide if they wish to make a costs application in due course. There are substantive differences between the Applicants and the Projcos. Each side is entitled to advance its position as it sees fit and be judged at the appropriate time, if a costs application is made. The kind of submissions which are appropriate to a costs application by the Projcos and a response by the Applicants are not appropriate to the Examination itself. Accordingly, the Applicants are not responding substantively in the Examination.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| REP2-071:45 | Given the material change in position from the Applicant on wake loss post-acceptance (from both a policy and EIA perspective) in spite of no new circumstances justifying that change in position, and given the Applicant's lack of engagement with this issue at ISH2 and in subsequent submissions, the Projcos reserve their right to request an order for costs in respect of time incurred on this matter.                                                | See response to REP2-071:44.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| REP2-071:46 | <b>NEXT STEPS</b><br><p>The Projcos reiterate their request that the Applicant engage with the Projcos and provides the necessary information to allow the Projcos to understand the implications of the DBS Projects on DBA, DBB and DBC in respect of wake loss.</p>                                                                                                                                                                                           | <p>The Projcos already have material information about the Projects contained in the DCO application. It is reasonable to assume that the Projcos will have carried out their own internal assessments of wake loss, based on that information, combined with a range of assumptions.</p> <p>As experienced developers, the Projcos will know that some parameters will not have been decided by the Applicants at this stage in the development process and some relevant matters will be commercially confidential. Furthermore, this is a technical field where different developers may prefer different models and methodologies to others, in the absence of an industry standard methodology or guidance.</p> <p>Accordingly, the Projcos are already in a position to have a reasonable understanding of the wake loss implications of the Projects, albeit subject to certain assumptions and sensitivity considerations. These are the kind of uncertainties which experienced developers are used to evaluating on a range of issues.</p> |
| REP2-071:47 | The Projcos expect individual agreements to be put in place between the Applicant and DBA Projco, DBB Projco and DBC Projco to regulate the interaction between the DBS Projects and the respective Projcos' project in respect of wake loss.                                                                                                                                                                                                                    | The Applicants acknowledge this statement. As the Projcos are aware, such agreements are only entered into where a new project is within a TCE buffer, which is not the case here.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## 2.3 Marine Management Organisation (MMO)

### 2.3.1 The Applicants' responses to the MMO's Deadline 2 Submission

4. Table 2-3 below presents the Applicants' responses to the MMO's Deadline 2 Submission [REP2-061].

Table 2-3 The Applicants' Response to MMO's Deadline 2 Documents [REP2-061]

| I.D.       | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Applicants' Response                                                                                                                                                                               |
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| REP2-061:1 | <p><b>Planning Act 2008, RWE Renewables UK Dogger Bank South (West) Ltd and RWE Renewables UK Dogger Bank South (East) Ltd Proposed Dogger Bank South Offshore Wind Farms Order</b></p> <p><b>Deadline 2 Submission</b></p> <p>On 10 July 2024, the Marine Management Organisation (the MMO) received notice under section 56 of the Planning Act 2008 (the PA 2008) that the Planning Inspectorate (PINS) had accepted an application made by RWE Renewables UK Dogger Bank South (West) Ltd and RWE Renewables UK Dogger Bank South (East) Ltd (the Applicant) for determination of a development consent order for the construction, maintenance and operation of the proposed Dogger Bank South Offshore Wind Farms (the DCO Application) (MMO ref: DCO/2022/00007; PINS ref: EN010125).</p> <p>The DCO Application seeks authorisation for the construction, operation and maintenance of Dogger Bank South (DBS) Offshore Wind Farm (OWF), comprising of up to 100 wind turbine generators in DBS East and up to 100 wind turbine generators in DBS West together with associated onshore and offshore infrastructure and all associated development (the Project).</p> <p>The DCO Application includes a draft development consent order (the DCO) and an Environmental Statement (the ES). The draft DCO includes, Marine Licence 1 (Schedule 10), Marine Licence 2 (Schedule 11), Marine Licence 3 (Schedule 12), Marine Licence 4 (Schedule 13) and Marine Licence 5 (Schedule 14) which are draft Deemed Consent under Part 4 (Marine Licensing) of the Marine and Coastal Access Act 2009 (MCAA 2009) (DML).</p> <p>This written representation is submitted without prejudice to any future representation the MMO may make about the DCO Application throughout the examination process. This representation is also submitted without prejudice to any decision the MMO may make on any associated application for consent, permission, approval or any other type of authorisation submitted to the MMO either for the works in the marine area or for any other authorisation relevant to the proposed development.</p> | No response is required.                                                                                                                                                                           |
| REP2-061:2 | <p><b>1. Comments on REP1-005 Applicant's Draft DCO Tracked Changes</b></p> <p><b>1.1 DCO and DML General Comments</b></p> <p>1.1.1 Please see Annex 1 Table 1 for comments relating to the DCO and DML. The MO has included more detailed comments below.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | The Applicants acknowledge this comment.                                                                                                                                                           |
| REP2-061:3 | <p><b>1.2 Transfer of the Benefit of the Order – Article 5</b></p> <p>1.2.1 The MMO objects to the provisions relating to the process of transferring and/or granting the deemed marine licence set out in the draft DCO at Article 5.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>The Applicants acknowledge the MMO's position.</p> <p>The Applicants refer to <b>The Applicants' Responses to Relevant Representations</b> [PDA-013], in particular response RR-030: 3.3.1:</p> |

| I.D.       | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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|            | <p>1.2.2 The MMO understands that Article 5 – Benefit of the Order is drafted in a similar way to previous consents granted by the Secretary of State (SoS), however the MMO has major concerns over the wording.</p> <p>1.2.3 The MMO would highlight that even if this Article has been included in previous DCOs it doesn't mean that these provisions should continue to be included, the drafting process is iterative, it has to be appropriate both generally and in the particular order in which it is to be included.</p> <p>1.2.4 Article 5(3) gives the right to permanently transfer the benefits of the deemed marine licences (DML) to a third party with the consent of the SoS.</p> <p>1.2.5 The MMO considers that this is a clear departure from the 2009 Act, which would normally require the licence holder (here 'the undertaker') to make an application to the MMO for a licence to be transferred. Instead, this provision operates to make the decision that of the undertaker, with the Secretary of State (SoS) providing consent to the transfer, rather than the MMO as the regulatory authority for marine licences considering the merits of any application for a transfer. Parliament has already created a statutory regime for such a process, and it is unclear what purpose the written consent of the SoS actually serves. If the intention is for the undertaker to be able to transfer the benefits under the terms of the DCO outside the established procedures under 2009 Act, the MMO queries why is it considered necessary or appropriate for the SoS to 'approve' the transfer of the DML.</p> <p>1.2.6 It is also unclear what criteria the SoS would be taking in determining whether to approve any transfer, and how this would differ from a consent granted by the MMO under the existing 2009 Act regime.</p> <p>1.2.7 Because of this confusion and potential duplication, it is the position of the MMO that these provisions are removed and that any transfer should be subject to the existing regime under the 2009 Act, with the decision maker remaining the MMO.</p> | <p><i>"For the reasons set out below, the Applicants do not agree with the removal of the parts of Article 5 of the <b>Draft DCO</b> [APP-027] requested by the MMO.</i></p> <p><i>Paragraph (14) of Article 5 disapplies sections 72(7) and (8) of the Marine and Coastal Access Act 2009 in relation to a transfer or grant of the benefit of a Deemed Marine Licence (DML). The drafting is based on the Model Provisions and reflects a long established precedent regarding the transfer of DCO powers and DMLs that has been endorsed by the Secretary of State (SoS) many times, including most recently in the Sheringham Shoal and Dudgeon Extensions DCO. Where a transfer of the DML is sought under Article 5, the SoS would consider the appropriateness of the party to whom the transfer or grant is proposed and would also take into account any representations made by the MMO before determining whether to grant consent, noting that Article 5 (paragraphs (6) and (9)) includes provisions requiring notification and consultation with the MMO where a transfer or grant of the benefit of a DML is proposed.</i></p> <p><i>From a procedural perspective, it is important that the DCO and any DML can be transferred together using the process set out in Article 5. It is considered important that the timing of any transfer or grant of powers / authorisations under the DCO and a DML be aligned, as there is considerable overlap between the authorisations and the requirements/conditions. This justifies a departure from the procedure under the Marine and Coastal Access Act 2009. Having deemed the marine licence in the DCO, it is also appropriate that any transfer under the Order include the DML as part of the wider transfer – it is one element of the wider order powers and should not be separated out from the authority to construct, operate and maintain the Nationally Significant Infrastructure Project (NSIP) granted by the Order. The Planning Act 2008 is clear that marine licences may be deemed in a DCO in appropriate areas (s149A) and that a DCO may include such further provisions ancillary to the operation of that DML (s122(3)), including transfer of the benefit. Section 122(5)(a) and (c) set out that a DCO may "apply, modify or exclude a statutory provision which relates to any matter for which provision may be made in the order" or "include any provision that appears to the Secretary of State to be necessary or expedient for giving full effect to any other provision of the order". The ability to transfer a DML is related to the deeming and it is therefore a sensible, expedient part of the wider power to transfer the benefit of the order.</i></p> <p><i>Overall, the drafting of this article reflects the equivalent provision in recent offshore wind DCOs including Hornsea Three, Norfolk Boreas, Norfolk Vanguard, East Anglia One North, East Anglia Two, Awel y Môr, Hornsea Four and Sheringham Shoal and Dudgeon Extensions. As noted above, this article is necessary to provide the Applicants with the appropriate commercial freedom to sell or lease the authorised projects while ensuring that the SoS can control such sale or lease through the need to obtain their consent."</i></p> |
| REP2-061:4 | <p>1.2.8 The MMO has concerns with Article 5(6)</p> <p>1.2.9 The MMO notes that there is no obligation for the SoS to take into account the views of the MMO when providing its consent. Furthermore, there is no obligation for the MMO to be informed of the decision of the SoS, notwithstanding its impact on the MMO as the licencing authority. From a regulatory perspective it is highly irregular that a decision to transfer a licence should not be the decision of the regulatory authority in that area (the MMO) but instead should be subject to such a cursory process as is set out in Article 5(3).</p> <p>1.2.10 The MMO questions why it is ok to require the SoS to consult with the MMO? If the SoS fails to do this they commit and offence under s161(1)(b) of the PA 2008 if the SoS does not have a reasonable excuse. This is another unintended consequence of the inclusion of the DML in this Article.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>The Applicants refer to <b>The Applicants' Responses to Relevant Representations</b> [PDA-013], in particular response RR-030: 3.4.3:</p> <p><i>"This drafting follows precedent including the recently made Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024, where an almost identical submission was made by the MMO, and the wording of the equivalent article was specifically considered by the SoS. In that case the equivalent article as made (Article 5) provides: "(6) The Secretary of State must consult the MMO before giving consent to the transfer of the benefit of the whole of any deemed marine licences under paragraph (3)." The Applicants accordingly submits that this issue has been considered by the SoS, precedent should be followed and that it is not for the Applicant to impose requirements on the SoS as to how they deal with any views expressed by the MMO. This drafting is well precedented and cannot reasonably be described as 'highly irregular' in the context of offshore wind DCOs. In addition to Sheringham Shoal and Dudgeon Extensions as quoted above, this wording has also been included in</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| I.D.       | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|            | 1.2.11 The MMO thus resists this change as unworkable. As explained above, Articles 5(3) sets out what is effectively a new non-legislative regime for the variation and transfers of marine licences.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p><i>multiple offshore wind DCOs, including (as examples and not an exhaustive list) Hornsea Four (Article 5(6)), Hornsea Three (Article 5(6)), East Anglia Three (Article 5(3)) and Galloper (Article 7(2))."</i></p> <p>In addition, the Applicants would highlight Article 5(9) of the <b>Draft DCO (Revision 6)</b> [document reference 3.1], which requires a notice to be given to the MMO prior to any transfer of the DMLs under article 5.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| REP2-061:5 | <p>1.2.12 In support of these provisions, Article 5(14) explicitly disapplies sections 72(7) and (8) of the 2009 Act, which would otherwise govern these procedures.</p> <p>1.2.13 This conflicts with the MMO's stated position that the DML granted under a DCO should be regulated by the provisions of the 2009 Act, and specifically by all provisions of section 72. Section 72(7)(a) of the 2009 Act permits a licence holder to make an application for a marine licence to be transferred, and, where such an application is approved, for the MMO to then vary the licence accordingly (s. 72(7)(b)). This power that should be retained and used in relation to the DML granted under the DCO and the MMO therefore resists the inclusion of this article 5(14) to disapply these provisions. The MMO notes that Article 5(14) does include an option for the MMO to update the name and has provided further comments below.</p> | <p>The Applicants refer to <b>The Applicants' Responses to Relevant Representations</b> [PDA-013], in particular response RR-030: 3.5:</p> <p><i>"The Applicants disagree that transfers of the DMLs should be regulated by the provisions of section 72 of the Marine and Coastal Access Act (MCAA) 2009. Where a transfer of a DML is proposed, the SoS would be looking at that in the context of all the provisions of the DCO. There are some Articles and Requirements relating to offshore matters within the DCO which overlap with the DMLs. In that context, it is entirely appropriate that the SoS has the ability to approve the transfer of a DML.</i></p> <p><i>Article 5(14) confirms that section 72(7) and (8) (variation, suspension, revocation and transfer) of the 2009 Act does not apply to a transfer of the DMLs falling within Article 5. Section 72(7) permits the licensing authority to transfer a marine licence to another person. Section 72(8) provides that "a licence may not be transferred except in accordance with subsection 7". Article 5 however provides for a transfer to take place in a different way to section 72(7). Since Article 5 is different from the precise wording of section 72(7) of the 2009 Act it is necessary to specify that section 72(7) only applies to a transfer not falling within Article 5 in order to enable Article 5 to operate. Without specifying this, Article 5 might be claimed to be inoperative because of adopting a different wording from section 72(7).</i></p> <p><i>The Applicants also note that this approach is aligned with "good practice point 11" in the Planning Inspectorate Advice Note 15: drafting Development Consent Orders (2018), which states that "Applicants should give careful consideration to the terms of the transfer Article they include in their draft DCO so as to ensure that it reflects how they envisage the NSIP being operated post-consent and, if possible, avoid potential inconsistencies between how DCO and DML transfer arrangements would operate." The Applicants' approach is intended to ensure that inconsistencies in the transfer arrangements do not arise."</i></p> |
| REP2-061:6 | 1.2.14 The key concern held by the MMO is that Article 5 operates to override and/or unsatisfactorily duplicate provision that already exist within the 2009 Act for dealing with variations to marine licences. Such provisions are also inconsistent with the PINS Guidance on how DMLs should operate within a DCO. Advice Note Eleven, Annex B, ( <a href="https://infrastructure.planninginspectorate.gov.uk/legislationandadvice/advicenotes/an11-annex-b/">https://infrastructure.planninginspectorate.gov.uk/legislationandadvice/advicenotes/an11-annex-b/</a> ), provides that where the undertaker choses to have a marine licence deemed by a DCO, the MMO, "will seek to ensure wherever possible that any deemed licence is generally consistent with those issued independently by the MMO." Article 5 as drafted is not in compliance with this guidance.                                                                    | <p>The Applicants refer to <b>The Applicants' Responses to Relevant Representations</b> [PDA-013], in particular response RR-030: 3.6:</p> <p><i>"The Applicants note the MMO's position but do not agree that the wording is inconsistent with the Planning Inspectorate Advice Note 11: Advice on working with public bodies in the infrastructure planning process, Annex B - MMO (2024). The Applicants note that the Planning Inspectorate Advice Note does not contain language that is absolute and that the advice is qualified by the wording "wherever possible" and "generally". The Applicants submit that the DMLs contained in the <b>Draft DCO</b> [APP-027] are "generally consistent" with those issued independently by the MMO but, for the reasons given above, there is good reason for the transfer provisions in article 5 to depart from the procedure set out in the MCAA 2009. The wording of Article 5 is well-precedented and has been accepted by the SoS many times in the context of offshore wind farm DCOs, most recently in the DCO for Sheringham Shoal and Dudgeon Extensions."</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| REP2-061:7 | 1.2.15 The MMO objects to the provisions relating to the process of transferring and/or granting the deemed marine licences set out in the draft DCO at Part 2, Article 5 insofar as these are intended to apply to the MMO and requests paragraphs 5(3), 5(6) and 5 (14) be removed in their entirety, with a clarification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | For the reasons stated above, the Applicants do not agree with the suggested amendment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| I.D.       | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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|            | added to specifically exclude these provisions from applying to the MMO (with corresponding wording amended in the Deemed Marine Licences).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| REP2-061:8 | <p>1.2.16 The MMO is concerned that the procedure proposed represents an unnecessary duplication of the existing statutory regime set out in s72 of the 2009 Act and that it will give rise to significant enforcement difficulties for the MMO. The MMO also considers that it has the potential to prejudice the operation of the system of marine regulatory control in relation to the proposed development. The MMO also regards the proposed procedure as cumbersome, more administratively burdensome, slower and less reliable than the existing statutory regime set out in s72 of the 2009 Act.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>The Applicants refer to <b>The Applicants' Responses to Relevant Representations</b> [PDA-013], in particular response RR-030: 3.8:</p> <p><i>"The Planning Act 2008 is clear that marine licences may be deemed in a DCO in appropriate areas (s149A) and that a DCO may include such further provisions ancillary to the operation of that DML (s122(3)), including transfer of the benefit. Section 122(5)(a) and (c) set out that a DCO may "apply, modify or exclude a statutory provision which relates to any matter for which provision may be made in the order" or "include any provision that appears to the Secretary of State to be necessary or expedient for giving full effect to any other provision of the order". The ability to transfer a DML is related to the deeming and it is therefore a sensible, expedient part of the wider power to transfer the benefit of the order.</i></p> <p><i>The MMO will remain the responsible body for enforcing the DMLs and the transfer provisions in Article 5 do nothing to undermine this position. The drafting of Article 5 is well-precedented and the Applicants submit that therefore it does not represent a piecemeal change to any aspect of the marine licence regime. The drafting of Article 5 is consistent with other comparable offshore wind DCOs; the Applicants are not seeking to introduce new or un-precedented drafting. The Applicants' position is that the provisions of the DMLs are clear and enforceable."</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| REP2-061:9 | <p>1.2.17 As a matter of public law, the MMO does not think the Order can contain a provision transfer of Benefit of the DML as is being proposed. PA 2008 Section 120(3) should read against Section 120(4) and Part 1 of Schedule 5, which the MMO thinks limits what the Order can contain to provisions which deem a marine licence to be granted under the order and to the conditions that should be deemed attached to that licence. The MMO does not consider this to be sufficiently wide as to allow the inclusion of provisions which transfer the Benefit of the Order.</p> <p>1.2.18 If the Order cannot contain a DML transfer provision for the reasons set out, then it cannot exclude Section 72 of the 2009 Act in the way proposed as Section 120(5) is limited to applying/modifying/excluding only those statutory provisions which relate to any matter for which a provision may be made in the order.</p> <p>1.2.19 The reason that the DCOs only deem the Marine Licence to be granted, rather than bringing the ML into the DCO as it does for other permissions under s33 of the PA 2008 is because the MMO was considered to be the expert in this area (see PINS advice note Annex 11 - MMO). The MMO questions why now is the SoS best placed to consider the implications of the marine licence being transferred and what might need to change?</p> <p>1.2.20 Therefore, the provision should not extend to the DML. The Order and the DML are not the same thing and so this provision does not extend to the DML, and references to the undertaker in the DML will stay as is.</p> | <p>The Planning Act 2008 is clear that marine licences may be deemed in a DCO in appropriate areas (s149A) and that a DCO may include such further provisions ancillary to the operation of that DML (s120(3)), including transfer along with the benefit of the other parts of the DCO. It is clear from the wording of section 120(5)(a) and (c) that a DCO may "apply, modify or exclude a statutory provision which relates to any matter for which provision may be made in the order" or "include any provision that appears to the Secretary of State to be necessary or expedient for giving full effect to any other provision of the order". DMLs are clearly a matter for which provision may be made in a DCO; section 72 MCAA 2009 is a provision relating to that deemed marine licence and the transfer power is accordingly authorised by s120 of the Planning Act.</p> <p>The ability to transfer the DML is related to the deeming and is submitted to be a sensible, expedient part of the wider power to transfer the benefit of the DCO. There is accordingly no legal barrier to including these provisions in the <b>Draft DCO (Revision 6)</b> [document reference 3.1] and there is strong precedent authority for its inclusion demonstrated by DCOs in English waters on this position which has been repeatedly adopted by the Secretary of State and has not been subject to legal challenge as to its competency.</p> <p>The drafting in the Draft DCO reflects a long-established precedent regarding the transfer of DCO powers and DMLs that has been considered acceptable by the Secretary of State many times, including most recently in the Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024. Where a transfer of a DML is sought under Article 5, the Secretary of State would consider the context of all the provisions of the DCO being transferred. That process would be robust in ensuring a suitable approach is being taken. In that context, it is appropriate that the Secretary of State has the ability to approve the transfer or grant of a DML such that the transfer or grant can fully reflect the relevant DCO and DML powers.</p> <p>The undertaker is required by statute to transfer the transmission assets to an OFTO and cannot retain those in the same ownership as the generation assets. A transfer of some of the benefit of the DCO and two of the DMLs at an early stage is therefore not only known to be required, but is a statutory necessity. It is undesirable to separate the transfer of the benefit of the order generally and the transfer of the benefit of the deemed marine licence as doing so could result in transfers occurring at different times and result in an inconsistency in</p> |

| I.D.        | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| REP2-061:10 | <p>1.2.21 Whilst the mechanism is different, what falls out of the DCO process is a marine licence granted under MCAA 2009 which is distinct and separate to the DCO itself. The DML falls back to the MMO to further manage/regulate under the provisions of MCAA 2009 once the DCO is granted, to be regulated alongside and consistently with all the other marine licences we might issue. This is in part why s149A(4) says a person who fails to comply with a condition of the DML does not commit an offence under s161 of the PA 2008 and why 149A(5) disapplies the notification of application and representations provisions of MCAA 2009 from the DCO process.</p> <p>1.2.22 The MMO would also highlight that even for granted offshore windfarm orders that include a form of the Benefit of the Order Article, the MMO has done multiple variations alongside the transfer of benefit to ensure the DML variation is issued as close to the approval from the SoS to ensure the correct undertaker is on the face of the DML and so that updates to the Marine Case Management System can be completed enabling compliance to continue to be monitored.</p> <p>1.2.23 With the addition of Article 5 (g) current wording this causes the MMO concern as this is just a notice of the transfer and does not include an official variation request to the MMO as required under Section 72 of the 2009 Act. The MMO does not believe the SoS cannot amend the DML once consented. Therefore, the MMO would have to use their regulatory power to conduct a variation and vary the licence to ensure the correct undertaker is on the schedule, this could cause a potential delay the project as if the transferring of unvaried licence impacted on our ability to enforce during this time, the MMO may have to suspend the licence while the MMO conducted the variation.</p> <p>1.2.24 This process could be delayed without the direct contact to the MMO to vary the DML. In addition to this the MMO has statute to charge for any variations and this is not covered by the current Article. This is an issue for two reasons, the Applicant would be getting work at a different rate as the consultation would be a statutory request from the SoS and this is not aligning with other marine licences as per PINS advice note Annex 11 - MMO and two this puts the emphasise for the MMO to vary the licence once notified so there would still be an additional step for the MMO to take.</p> <p>1.2.25 Additionally, there are practical considerations. When the MMO transfers a licence under s72(7) of 2009 Act the MMO must vary it. If the transfer was affected under the Order the MMO are likely to need to vary the licence as a result, under s153 and the schedule 6 of the PA 2008, only the MMO can do that. The MMO could end up with the transfer being affected under the Order but then having to vary separately using our own powers. If the transferring of the unvaried licence impacted on the MMO's ability to enforce during this time, this could lead to the MMO having to suspend the licence whilst the variation was carried out.</p> | <p>The Applicants refer to <b>The Applicants' Responses to Relevant Representations</b> [PDA-013], in particular response RR-030: 3.10:</p> <p><i>"As stated above, the drafting of Article 5 is not novel. The approach has been accepted by the SoS on multiple previous occasions and therefore has been deemed to be administratively workable.</i></p> <p><i>Article 14(5) expressly allows the MMO to amend any DML granted under Schedules 10 – 14 of the <b>Draft DCO</b> [APP-027] to correct the name of the undertaker to the name of the new transferee or lessee under Article 5.</i></p> <p><i>The dual approach of the SoS amending a DCO and the MMO varying any related DML to reflect changes that affect both consents is often relied upon when non-material changes to DCOs and DMLs are made post-consent.</i></p> <p><i>For the reasons stated above, the Applicants are of the position that relying on the procedure under section 72 of the MCAA 2009 is not appropriate in the context of any transfer of the DCO and DMLs under Article 5."</i></p> |
| REP2-061:11 | 1.2.26 The MMO does not consider that the PA 2008 allows the DCO to make a provision to transfer the benefit of the DML in the way that is proposed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | The Applicants note the MMO's position but for the reasons stated above do not agree.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| REP2-061:12 | 1.2.27 The MMO strongly disagrees with the inclusion of the Article and the fundamental impact and change to the process.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | The Applicants note the MMO's position but for the reasons stated above are of the position that the wording of Article 5 is appropriate. The drafting reflects a long-established precedent regarding the transfer of DCO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| I.D.        | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| REP2-061:13 | <p><b>1.3 Force Majeure</b></p> <p>1.3.1 The MMO maintains its position regarding Force Majeure, as it is not necessary to be included within the DMLs. It is not something that the MMO would include in standalone marine licences. PINS advice note Annex 11 - MMO says that DMLs should be broadly consistent with standalone marine licences.</p> <p>1.3.2 The MMO understands that Force Majeure is about events, situations and circumstances that arise which are outside of a person's control.</p> <p>1.3.3 Currently the condition wording used is drafted to apply for stress of weather or any other cause which is very broad. It could cover anything, including causes which are entirely within the master's control such as negligence matters. Currently the MMO believes Condition 14 in DML 1 and 2, 13 in DML 3 and 4 and 10 in DML 5 does not meet the five tests as set out in the National Planning Policy Framework for a number of reasons:</p> <ul style="list-style-type: none"> <li>• necessary;</li> <li>• relevant to planning;</li> <li>• relevant to the development to be permitted;</li> <li>• enforceable;</li> <li>• precise; and</li> <li>• reasonable in all other respects.</li> </ul> <p><u>Necessary</u></p> <p>1.3.4 If you read Section 86(1)(b) and 86(2) of MCAA 2009, for the defence to be relied on the person relying on it must inform the MMO that the act was carried out, tell it where it was carried out, the circumstances in which it was carried out, and what articles/objects were concerned. The inclusion of Condition 19 in Schedule 3 and 4 removes this defence and replaces it with a wider and less stringently controlled authorisation to deposit articles/substances and the MMO does not believe this is necessary.</p> <p><u>Enforceable</u></p> <p>1.3.5 The condition as it stands is too subjective and therefore unenforceable and this due to the fact that it is down to the master to determine whether it is necessary to make the deposit and there are no defined criteria.</p> <p><u>Precise</u></p> <p>1.3.6 The condition is also not restricted to Force Majeure situations or 'no fault situations', due to the inclusion of 'for any other cause'. The MMO questions this wording and why this has been included?</p> <p>1.3.7 In effect the only obligation the master would have if Condition 19 in Schedules 3 and 4 are included, is to notify the MMO within 48 hours that the deposits have been made. The MMO questions if this notification would be enough to allow enforceability and if it was to remain should there not be further requirements to then remove the items.</p> <p><u>Reasonable</u></p> | <p>The Applicants note the MMO's position but do not agree.</p> <p>The Applicants would highlight that "force majeure" is defined in law as covering events outwith a parties' reasonable control commonly including Acts of God, flood, drought, earthquake or other natural disaster; terrorist attack, civil war, civil commotion or riots, war, threat of or preparation for war, armed conflict, imposition of sanctions, embargo, or breaking off of diplomatic relations; nuclear, chemical or biological contamination or sonic boom; fire, explosion or accident.</p> <p>The Applicants do not accept that there is any basis for submitting that force majeure would cover the Applicants' contractor's negligence (noting that nothing in the DCO or DMLs differentiates between the undertaker and its contractors, the undertaker cannot 'pass off' responsibility to a contractor and somehow become immune under the DCO). The MMO's position is contrary to judicial interpretation of "force majeure" and requires to be substantiated.</p> <p>The Applicants maintain that within the accepted, judicially interpreted meaning of "force majeure" and not the incorrect meaning the MMO are attempting to ascribe, it is entirely reasonable for this to be included.</p> <p>"Broadly consistent with" does not mean identical. Simply because the MMO have adopted a misleading interpretation of "force majeure" does not mean that the Secretary of State is bound to follow that. It is noted that this provision has been included in the Sheringham Shoal and Dudgeon DCO (2024), the Awel y Mor DCO (2023), the Hornsea Four DCO (2023) and the East Anglia ONE North DCO (2022) as examples. It is therefore clear that this inclusion is well preceded in recent offshore wind DCO decisions.</p> <p>The Applicants' position is that the drafting of this provision does meet the relevant legal tests. The master of a vessel must be able to take necessary actions to preserve the safety of their vessel and persons on it. "Any other cause" covers unforeseen events that endanger a vessel and cannot therefore be listed. The Applicants note that "any other cause" is wording that is preceded in other DMLs, as listed above. For the reasons given above it is considered to be reasonable to include this wording.</p> |

| I.D.        | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|             | <p>1.3.8 The test set in Condition 19 in Schedules 3 and 4 which must be met to allow these deposits to be made is a much lower threshold test to that set in Section 86 of MCAA 2009. This is because the safety of human life and/or the vessel is threatened is not the same as for the purpose of saving life or securing the safety of the vessel. The MMO questions why these masters and vessels be treated more favourably than others in this situation?</p> <p>1.3.9 To summarise the MMO does not agree with the Applicant's reasons for including this provision. The condition should be removed, as the defence (Section 86 of MCAA 2009) will apply if the Applicant or vessel masters needs to make a deposit for a Force Majeure reason.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| REP2-061:14 | <p><b>2. Comments on Pre-Examination Procedural Deadline Submissions from Deadline 1</b></p> <p><b>2.1 General Comments</b></p> <p>2.1.1 The MMO has reviewed the following documents:</p> <ul style="list-style-type: none"> <li>AS-052 - 6.1 Report to Inform Appropriate Assessment Habitats Regulations Assessment Part 2 of 4 - Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3) (Tracked)</li> <li>AS-105 - 10.41 Heat Mapping Report: Atlantic Herring and Sandeel (Revision 1)</li> <li>AS-142 Appendix A Fish and Shellfish Ecology Environmental Statement</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No response is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| REP2-061:15 | <p><b>2.2 Fisheries</b></p> <p>2.2.1 The MMO previously raised a major comment about the formation of the herring potential spawning habitat and the sandeel potential habitat 'heat' maps. The Applicant has now provided updated 'heat' mapping for both herring and sandeel in the Heat Mapping Report which outlines the data used to form each heatmap. The updated heat map for identifying potential herring spawning habitat uses the updated heat mapping methodology as outlined in Kyle-Henney <i>et al.</i> (2024), meaning that the data layers used to generate the updated heatmaps provided are therefore slightly different to the 'heat' maps the MMO originally advised on.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No response is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| REP2-061:16 | <p>2.2.2 It is appropriate for the Applicant to use the updated 'heat' mapping methods outlined in Kyle-Henney <i>et al.</i> (2024) and Reach <i>et al.</i> (2024), and it is helpful to see the individual layers mapped separately as this allows the source data underpinning the final 'heat' maps to be checked. However, it appears that only a single year (2020) of vessel monitoring data (VMS) has been used to inform the 'heat' maps for both herring and sandeel. This is significantly less data than was included in the original 'heat' maps and although the layer appears to cover a large spatial area (in Figures 2.5 and 3.6), one year of data only provides a snapshot of fishing activity for that year. In order for the VMS layer to provide the most expansive representation of fishing activity possible, a minimum of 10 years of data should be presented with respect to the 'heat' maps for both herring and sandeel. This layer should either be corrected to present 10 years of VMS data, or the Applicant should be able to demonstrate why the spatial data provided in the 2020 VMS data is more expansive than the sum of 10 years of VMS activity.</p> | <p>The VMS data presented within the <b>Heat Mapping Report: Atlantic Herring and Sandeel</b> [AS-105] (referenced as MMO, 2023<sup>1</sup>) represents fishing data from the years 2016-2020. It is labelled 2020 VMS data in the <b>Heat Mapping Report</b> [AS-105] due to the most recent revision date being 1<sup>st</sup> January 2020, but referenced as MMO (2023<sup>1</sup>) in compliance with the data copyright (for further details see the attribution statement section within MMO (2023<sup>1</sup>)).</p> <p>Whilst only representing 5 years' worth of data, this was deemed sufficient in determining the baseline fishing activity for the purposes of the <b>Heat Mapping Report</b> [AS-105]. The role of this data in the Kyle-Henney <i>et al.</i> (2024<sup>2</sup>) methodology is to identify areas in which fishing activity occurs rather than providing detail on the level of fishing activity in any one year. The addition of another 5 years of fishing data (so that 10 years would be achieved) will not alter the conclusions of the <b>Heat Mapping Report</b> [AS-105] given the distribution of fishing data throughout the Offshore Export Cable Corridor and within the Array Areas (as presented by Figure 2-5 within the <b>Heat Mapping Report</b> [AS-105]).</p> |

<sup>1</sup> <https://environment.data.gov.uk/dataset/bf55694c-3330-4c1d-a48e-db6bbe82ad77>

<sup>2</sup> Kyle-Henney, M., Reach, I., Barr, N., Warner, I., Lowe, S., and Lloyd Jones, D., 2024. Identifying and Mapping Atlantic Herring Potential Spawning Habitat: An Updated Method Statement. Available at: [https://www.erm.com/globalassets/insights/documents/Identifying\\_and\\_Mapping\\_Atlantic\\_Herring\\_Potential\\_Spawning\\_Habitat\\_An\\_Updated\\_Method\\_2024\\_w\\_Appendices.pdf](https://www.erm.com/globalassets/insights/documents/Identifying_and_Mapping_Atlantic_Herring_Potential_Spawning_Habitat_An_Updated_Method_2024_w_Appendices.pdf)

| I.D.        | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| REP2-061:17 | <p><u>Sandeel</u></p> <p>2.2.3 The updated sandeel heat map (Figure 3.1) indicates that the majority of the Humber region, including the DBS export cable corridor (ECC) and the array areas represent suitable supporting habitat for sandeel. OneBenthic sandeel presence data indicates that sandeel have been recorded within the proposed array area. The underwater noise (UWN) contours for mortality and potential mortal injury (219 decibel (dB) cumulative sound exposure level (SELcum), recoverable injury (216 dB SELcum), and temporary threshold shift (TTS (186 dB SELcum), as per the pile driving threshold guidelines described by Popper <i>et al.</i> (2014), have been included on Figure 3.1 for reference which is helpful. Sandeel do not possess a swim bladder which is involved in hearing and so the impact ranges for the effects of mortality and recoverable injury are highly localised. The impact range for the effects of TTS extends over a much larger area that is comprised of high and medium-high confidence sandeel habitat.</p>                                                                                                                                                                                                                                                                                      | No response is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| REP2-061:18 | <p>2.2.4 The Applicant has provided Particle Size Analysis (PSA) data which ground-truths the sediment suitability across the array site for sandeel. The data presented in Table 3.1 shows that the majority of sampling locations across the array consist of 'preferred' sediment types for sandeel. The MMO agrees with the Applicant's conclusion that the majority of the array areas and ECC are located within the 'preferred' habitat for sandeel. Due to their largely demersal ecology, sandeel are most at risk from habitat disturbance (including immediate direct disturbance as well as more long-term sediment changes) and therefore based on the updated evidence presented in the updated Heat Mapping Report.</p> <p>The MMO maintains the request that pre- and post-construction monitoring proposal for sandeel habitat suitability should be conditioned within the DML to ensure that the sediment composition of the areas of medium, high and very potential habitat which fall within the array area and cable route are monitored prior to and following construction of the Project. Whilst this does not specifically mitigate impacts to sandeel, regular or annual monitoring allows for significant changes in the sediment composition (and therefore sandeel habitat suitability) to be noticed and accordingly managed.</p> | The <b>Draft DCO (Revision 6)</b> [document reference 3.1] includes provisions which require pre-construction and post-construction surveys to determine "habitat with suitability for sandeel" (conditions 20(4)(a) and 22(3)(a) of DMLs 1 and 2, conditions 18(4)(a) and 20(3)(a) of DMLs 3 and 4 and condition 14(4)(a) and 16(3)(a) of DML 5). The post-construction surveys must determine any change in the location, extent and composition of any such habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| REP2-061:19 | <p>2.2.5 The MMO previously requested that the Applicant supplement their sandeel habitat assessment with data from the North Sea Sandeel Survey (NSSS), which is carried out in Sandeel Area 1 in December each year. It is disappointing that the Applicant has again not presented this data to support their assessment of sandeel habitat suitability. Could the Applicant please provide a justification for why this additional requested data has not been presented and clarification as to whether they intend to present these data at all in future?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>The Kyle-Henney <i>et al.</i> (2024<sup>2</sup>) methodology describes the use of sandeel records in the OneBenthic database within the heat mapping process; with appropriate caveats relating to areas without sandeel presence data not being reflective of areas where sandeel are not present.</p> <p>The NSSS data has several sampling stations within and around the DBS Array Areas, these overlap with the locations of OneBenthic samples which were determined by the <b>Heat Mapping Report</b> [AS-105] as being of high confidence supporting habitat for sandeel. Therefore the inclusion of NSSS would not add benefit to the assessment or change the conclusions of the <b>Heat Mapping Report</b> [AS-105]. Furthermore, sandeel were originally considered to be present within the Array Areas and assessed as such within the Environmental Impact Assessment (EIA), and therefore the addition of NSSS data would not alter the original EIA conclusions made within the ES.</p> <p>An investigation of the NSSS data has been undertaken and presented for the avoidance of doubt. Three sampling stations are located &gt;10km south of the Offshore Export Cable Corridor but no samples are located within the cable corridor beyond the boundary between the Array Areas and Offshore Export Cable Corridor. These findings reflect sandeel presences as presented within the EIA baseline, and assessed within the ES.</p> <p>The 2014-2024 NSSS sandeel presence data is presented in Figure 1-1 of <b>Appendix A</b> for transparency.</p> |

| I.D.        | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| REP2-061:20 | <p><u>Herring</u></p> <p>2.2.6 Notwithstanding the insufficient number of years of VMS data used to produce the 'heat' maps (point 2.2.21), the herring potential spawning habitat 'heat' map appears otherwise appropriately informed with suitable data. The Applicant recognises that kilometre points (KP) 10 - KP80 of the ECC intersects with a large extent of 'high' spawning potential which is represented by heat scores &lt;0.08 (see Figure 2.1). Figure 2.1 also shows that the area of the ECC beyond KP80 and the DBS Array Areas are located outside of the high potential herring spawning habitat. The UWN contours for mortality and potential mortal injury (207 dB SELcum), recoverable injury (203 dB SELcum), and TTS (186 dB SELcum), as per the pile driving threshold guidelines described by Popper <i>et al.</i> (2014), as well as the UWN contour for the range of behavioural effects (135 dB SELss) in herring, have been included on Figure 2.1 which is helpful in understanding the range of impact from UWN based on the Applicant's new piling profile (which does not include the Electrical Switching Platform (ESP) within the ECC). It is assumed that the UWN contours provided in Figure 2.1 represent unmitigated monopiling based on the Project's worst-case piling scenario.</p> | <p>The Applicants confirm that these figures represent unmitigated monopiling based on the Projects' worst case piling scenario in terms of total area impacted. This is discussed in more detail within Underwater Noise Action Point 34 within <b>The Applicants' Responses to January 2025 Action Points (Revision 2)</b> [AS-155]. Attention should be given to the Applicants' position on the 135dB threshold, which was specifically included upon request of the MMO in previous consultations. Please refer to the response to REP2-061:22 for a summary of this position.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| REP2-061:21 | <p>2.2.7 The Applicant has provided particle size analysis (PSA) data to ground-truth the sediment suitability across the ECC as herring spawning habitat. The data presented in Table 2.1 shows that the sampling locations along the section of the ECC which overlaps with potential herring spawning habitat as indicated by Figure 2.1, has variable sediment suitability types for herring spawning. There are two main impact pathways from the Project which are of significant concern in relation to the Banks herring spawning population which uses the Flamborough Head herring spawning ground:</p> <ul style="list-style-type: none"> <li>• Disturbance to herring spawning habitat caused by seabed preparation and cable laying activities along the ECC including immediate direct disturbance as well as more long-term sediment changes.</li> <li>• Disturbance to adult herring engaged in spawning caused by UWN from piling and unexploded ordnance (UXO) clearance activities. These are explained in turn below.</li> </ul>                                                                                                                                                                                                                                                                             | <p>No response is required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| REP2-061:22 | <p>UWN disturbance to adult herring engaged in spawning from piling and UXO clearance activities.</p> <p>2.2.8 The information provided in the Heat Mapping Report pertains primarily to cable laying activities rather than addressing UWN disturbances to spawning herring from piling or UXO Clearance (noting this will be a separate marine licence application). The UWN contours included in Figure 2.1 are helpful for reference, but the MMO still considers that the range of impact for TTS and behavioural impacts is still unacceptably large. The Applicant has also not provided any further information as to how they might mitigate UWN disturbances. For this reason, the MMO maintains that <b>it is necessary to request a temporal restriction on all piling and UXO clearance activities during the Banks herring spawning season (1 August – 31 October inclusive).</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>The majority of impact pathways for the Projects relating to Atlantic herring spawning grounds occur within the Offshore Export Cable Corridor, with some degree of overlap with the TTS extent for piling activities occurring in the northeastern extent of the potential spawning habitat as presented in Figure 2-1 of the <b>Heat Mapping Report: Atlantic Herring and Sandeel</b> [AS-105]. Whilst the extent of TTS is not unusual for piling activities within an offshore wind farm array (~50km), it is noted that there is potential for underwater noise impact to Atlantic herring. Please refer to <b>Chapter 10 Fish and Shellfish Ecology</b> [APP-091] for the detailed assessment, noting that the conclusion of the assessment is that these impacts are Not Significant in EIA terms.</p> <p>When using the industry standard for assessing the potential for a significant effect from TTS (Popper <i>et al.</i>, 2014<sup>5</sup>), the IHLS data shows that the overlapping potential spawning habitat is not highly productive (consistently 1-50 larvae per m<sup>2</sup> with an isolated sample of 50-200 larvae per m<sup>2</sup> north of KP90 – refer to Figure 2.7 of the <b>Heat Mapping Report: Atlantic Herring and Sandeel</b> [AS-105]), and therefore the sound produced during piling activities is highly unlikely to result in any significant effect to the North Sea Autumn Spawning Atlantic herring population.</p> <p>In light of this finding, which is supported by extensive assessment work, no mitigation is deemed necessary by the Applicants. However, it should be noted that the acoustic envelope assessed is a worst case which may be reduced and refined as the Projects mature. In addition, mitigation may be adopted for other fauna. One,</p> |

| I.D.        | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>or both, of these possibilities may be realised which would provide benefits in terms of the reduction of acoustic impacts of the Projects on taxa such as herring.</p> <p>As originally described within the memo submitted to the MMO dated 2<sup>nd</sup> November 2023 (see <b>Appendix B</b>), the Applicants strongly oppose the use of the 135dB behavioural threshold (which was determined for sprat <i>Sprattus sprattus</i>) for the assessment of potential impacts to Atlantic herring <i>Clupea harengus</i>. Whilst sprat and Atlantic herring are both species within the family Clupeidae, this is not a suitable justification for implementation of this threshold given the evidence presented by Hawkins <i>et al.</i> (2014<sup>3</sup>). The scientific publications upon which this threshold is based (Hawkins and Popper, 2014<sup>4</sup>; Hawkins <i>et al.</i>, 2014<sup>3</sup>) <b><u>explicitly state that: "these data cannot yet be used to define the sound exposure criteria"; and "We would stress, however, that it would be premature to use these data to define sound exposure criteria for sprat and mackerel" respectively.</u></b> Therefore, on the evidence of the authors own position, the use of 135dB as a behavioural threshold should not be incorporated into MMO advice for the purposes of EIA. Guidance for impact thresholds is provided within Popper <i>et al.</i> (2014<sup>5</sup>), (published the same year, and noting the common authors between these publications), the underwater noise impact thresholds presented are considered best practice guidance since its publication and are the ones used in the Applicants' assessment (<b>Chapter 10 Fish and Shellfish Ecology</b> [APP-091]).</p> <p>For the above reasons, the Applicants do not agree that the proposed restriction is proportionate, evidence-based or necessary.</p>     |
| REP2-061:23 | <p>2.2.9 The MMO notes that the Applicant has still not proposed any strategies to mitigate the impacts to herring from UWN arising from piling and UXO clearance activities. Given the availability of effective alternatives to unmitigated piling – i.e. noise abatement systems (NAS) to reduce noise at source - unmitigated pile driving cannot be justified on the basis that there are no realistic alternatives. NAS would reduce the range of potential impacts from UWN on sensitive species and habitats, an issue which is especially pressing given the wider context of the current expansion of offshore wind developments across the Dogger Bank and wider North Sea. The implementation of adequate NAS may also remove the need for seasonal piling restrictions, providing the Applicant can demonstrate that the range of impact from UWN in relation to the herring spawning ground is adequately reduced. Until such proposals are put forward, a full restriction on piling and UXO clearance should be implemented for the duration of the herring spawning season.</p> | <p>The impact assessment undertaken within the EIA concluded that impacts relating to underwater noise are Not Significant in EIA terms, and therefore no need for additional mitigation has been identified. For reasons described within the response to REP2-061:22, behavioural thresholds relating to the 135dB limit are not appropriate for the determination of impact on Fish and Shellfish Ecology receptors. It should be noted that the acoustic envelope assessed is worst case which may be reduced and refined as the Projects matures and the footprint of acoustic disturbance caused by the Projects may reduce in any event, thus reducing effects on herring.</p> <p>Where significant effects are assessed as likely, the Applicants' preferred mitigation is a change to work practices, not a time restriction. On a precautionary and without prejudice basis, the Applicants have included noise reduction systems, such as NAS, within the Projects' procurement strategy as an optional element, allowing the Projects to consider the use of NAS at the earliest point during the procurement process. Should the final acoustic envelope of the Projects – and assessments thereof - warrant the adoption of NAS, this would allow the Projects to utilise this mitigation for piling. Any NAS requirements would be determined post-consent, and secured in the final Marine Mammal Mitigation Protocol and Site Integrity Plan for the Southern North Sea Special Area of Conservation based on the final project design and approved by the MMO.</p> <p>Based upon the evidence provided throughout this document in response to the MMO's comments, the Applicants do not consider the implementation of NAS for the purpose of mitigating potential effects upon spawning Atlantic herring to be proportionate, as this requirement is based on an inappropriate threshold as</p> |

<sup>3</sup> Hawkins A.D., Roberts L., and Cheesman S. (2014). Responses of free-living coastal pelagic fish to impulsive sounds. J. Acoust. Soc. Am., 135(5): pp. 3101-3116.

<sup>4</sup> Hawkins A.D., and Popper A.N. (2014). Assessing the Impact of Underwater Sounds on fishes and Other Forms of Marine Life. Acoust. Today, 10(2): pp. 30-41.

<sup>5</sup> Popper A.N., Hawkins A.D., Fay R.R., Mann D.A., Bartol S., Carlson T.J., Coombs S., Ellison W.T., Gentry R.L., Halvorsen M.B., Løkkeborg S., Rogers P.H., Southall B.L., Zeddies D.G., and Tavolga W.N. (2014). Sound Exposure Guidelines. In: ASA S3/SC1.4 TR-2014 Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report prepared by ANSI-Accredited Standards Committee S3/SC1 and registered with ANSI. SpringerBriefs in Oceanography. Springer, Cham.

| I.D.        | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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Further, the application of mitigation would be contrary to the finding of the EIA for the impacts of noise this species which has concluded that any effects are Not Significant in EIA terms.</p> <p>It is important to note that UXO clearance activities will be consented separately from the project development consent with any applications for UXO clearance supported by a specific assessment of effects. It should be noted that, in order to comply with prevailing policy, it is likely that low order methods of detonation would be the principal method for clearance, should any clearance activities be required. Any mitigation proposals for UXO clearance activities would be presented in support of an application for a Marine Licence for this specific activity.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| REP2-061:24 | <p><u>Direct disturbance to herring spawning habitat caused by seabed preparation and cable laying activities along the ECC including immediate direct disturbance and sediment change.</u></p> <p>2.2.10 The Applicant has provided additional ecological data in an attempt to have the 11 requested temporal restriction for cable works along the ECC route dismissed. Section 2.3 of the Heat Mapping Report (document listed in point 7) uses parts of the approach employed for the Eastern Greenlink 21<sup>6</sup> EGL2: MLA/2022/00273/1, L/2023/00211/1 (EGL2) subsea cable marine licence (ML) (which is also proposed to run through the Flamborough Head herring spawning ground) as the rationale for removing the requested temporal restriction on cable installation works along the ECC route. There is some merit in the approach however the Applicant's rationale is missing some key data:</p> <ul style="list-style-type: none"> <li>Section 2.3.1 presents near seabed temperatures and herring larval development rates. This information is relevant for what the Applicant is trying to do, but the Applicant has not presented any site-specific near seabed temperature data. It is claimed in the report that "Nearbed temperature samples taken at the IHLS sampling sites surrounding the Offshore Export Cable Corridor record consistent temperatures of &gt;13°C", however this is not evidenced anywhere. It is necessary to see the evidence of sea bottom temperature data for the International Herring Larval Survey (IHLS) sample stations within and around the ECC mapped for each year of data used (2007-2023), with temperature data for each station presented.</li> <li>This will then demonstrate the spatial and interannual variability in near-seabed temperature data to inform the appropriate site-specific larval development periods. Until this information is presented it is premature to be defining explicit larval development periods.</li> <li>Following on from the point above, until site-specific near seabed temperature data is provided it is not appropriate to determine the egg development and yolk-sac absorption periods for use in back-calculations to establish the start or end of the 'peak' of spawning activity. It is correct that a back-calculation exercise was the method through which the EGL2 cable laying restriction was temporally refined (not removed). The Applicant should be mindful that the MMO will advise refined dates based on the evidence provided, and that these will not necessarily be the same dates as were applied to the EGL2 ML.</li> <li>The Applicant should also recognise that the EGL2 temporal restriction was applied spatially and that, although the temporal restriction on cable laying activities during the herring spawning season was refined for EGL2, the restriction was not completely removed as a result of the back-calculations and additional evidence. The installation of multiple cables running through the Flamborough Head herring spawning ground represents a significant source of direct disturbance to spawning habitat which will</li> </ul> | <ul style="list-style-type: none"> <li>The IHLS data for the Offshore Export Cable Corridor are presented in Figures 2-1 to 2-4 and Figures 3-1 to 3-4 of <b>Appendix A</b>. Please note that due to changes in IHLS method, 2007-2017 data is presented separately to 2018-2023 data. The 2018-2023 data includes a specific column for 'BotTemp', which carries more confidence in the true seabed temperature collected by IHLS surveys than the 'TempMaxSam' column in pre-2017 data.</li> <li>It can clearly be seen from the figures presented that temperature recorded by the IHLS varies spatially and annually within the spawning grounds off Flamborough Head. As stated above, 2018-2023 data specifies temperature recorded at the seabed, whereas this cannot be guaranteed within the 2007-2017 IHLS data. As such, temperatures collected within the 2018-2023 data represent the best available evidence for seabed temperatures upon which to calculate egg and larval development periods. As shown within <b>Appendix A</b>, the Offshore Export Cable Corridor overlaps with sample stations that generally recorded BotTemps of &gt;=13°C, with one exception where temperature was recorded at 12-&lt;12.8°C (recorded as 12.19°C in 2021). Incidentally, this trend is also present within 2007-2017 data which show the Offshore Export Cable Corridor temperature to be &gt;13°C in most years.</li> <li>Based on the above information, the interannual seabed temperature is considered to be &gt;13°C for the purposes of identifying egg and larval development rates in alignment with the <b>Heat Mapping Report</b> [AS-105].</li> <li>The Applicants acknowledge the fact that the Eastern Greenlink 2 (EGL2) subsea cable project is located within a greater extent of the Atlantic herring potential spawning habitat than the Projects' Offshore Export Cable Corridor (EGL2, 2024<sup>6</sup>), but that both projects converge to a similar location off Flamborough Head. Both projects have the potential to result in temporary habitat loss and therefore have the potential to result in a cumulative effect. However, the construction of both projects is unlikely to coincide and it is expected that the seabed will return to baseline conditions within a short time period, therefore no long-term cumulative effects are predicted.</li> <li>In response to bullet no. 5 regarding the representation of seabed habitat by the IHLS survey:</li> </ul> <p>The Applicants would like to draw the MMO's attention to the statements made within the Kyle-Henney <i>et al.</i> (2024<sup>2</sup>) report regarding the confidence in the IHLS data for the purposes of identifying potential supporting habitat for Atlantic herring. Whilst it is true that the IHLS data is apportioned using the maximum weighting in terms of identifying areas as spawning grounds and therefore likely to contain potential spawning habitat, the IHLS data is a direct sample of larvae in the water column approximately 5m above the seabed, rather than a direct sample of seabed habitat. The weighting applied by Kyle-</p> |

<sup>6</sup> EGL2: MLA/2022/00273/1, L/2023/00211/1

| I.D.        | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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|             | <p>inevitably result in a likely significant cumulative impact to spawning herring and the integrity of the Flamborough Head spawning ground.</p> <ul style="list-style-type: none"> <li>The MMO strongly disagrees with the Applicant's statement that "larvae caught by the IHLS are likely to be mobilised by nearbed currents, and are not directly associated with the seabed at point of capture and therefore not considered to be at risk of potential impacts associated with the installation of cables" as this totally misrepresents the risk to herring larvae from cable laying. The Applicant should note that the larvae that are caught using the Gulf VII sampler during the IHLS survey are considered to be associated with the surrounding spawning habitat. This is proven through the correlation of known suitable spawning substrate (i.e. gravel/coarse sediment) in the same location that the larvae are caught. This is why the IHLS data is assigned the highest confidence score in the updated herring potential spawning habitat heatmapping method (as per Kyle-Henney <i>et al.</i> (2024), as this is considered the best evidence for determining areas of active spawning habitat through the presence of larvae.</li> <li>The MMO has some concerns regarding the data underpinning Figure 2.7 of the report. Firstly, it is not easy to determine the relative IHLS larval abundances with the sampling points for different years laid on top of each other. These data would be better presented as separate maps for individual years of data so that the relative importance of the area of spawning habitat which underlies the ECC can be clearly seen.</li> <li>Secondly, the data used to inform this map refers to larval abundances which are recorded in the IHLS data as the larval abundance per metres squared (m2) not as a count. This should be amended as a point of inaccuracy.</li> <li>Further, defining all abundances greater than &gt;600 larvae is not appropriate when presenting larval data for the 15-year period used. It is not uncommon for areas within the main spawning grounds to record thousands, or tens of thousands, of larvae per m2. In this sense, Figure 2.7 does not provide the necessary resolution of the data as the current presentation likely underrepresents IHLS stations where larval abundance is greater than 600 larvae/m2. The Applicant should revisit the data used to underpin this plot and ensure that the scale for larval abundance is <ul style="list-style-type: none"> <li>a) presented as larvae per m2, and</li> <li>b) that the scale for larval abundance per m2 reflects the true values of larval abundances observed in the data, rather than clipping 'high' abundance data points at &gt;600 larvae/m2 (as a sample point indicating '&gt;600 larvae/m2' could be representing a sample of 601, or 6000 larvae/m2, there's no way to differentiate between these values when clipped at &gt;600 larvae/m2).</li> </ul> </li> <li>This is especially relevant when plotting larval abundance values for a time-series (i.e. a 15-year IHLS period) where larval abundance would exceed tens of thousands in some locations.</li> </ul> | <p>Henney <i>et al.</i> (2024<sup>2</sup>) represents this dataset as the best available data as an indicator of spawning compared to the other inputs of the heat mapping approach, which are not direct samples of potential spawning habitat. Whilst there may be a correlation between the location of IHLS sampling stations and potential spawning habitat, there is limited confidence in the larvae sampled having originated from the seabed at the sampling station location. As this is the case, and that the plankton sampling takes place within the water column and not on the seabed, it is difficult to understand how these larvae would not be subject of nearbed currents as suggested by the MMO.</p> <p>Furthermore, evidence shows that Atlantic herring larvae are tolerant of potential effects of suspended sediment concentration, which are in turn spatially limited to the immediate vicinity of the cable installation apparatus (Messiah <i>et al.</i>, 1981<sup>7</sup>; Kiørboe <i>et al.</i>, 1981<sup>8</sup>; Griffin <i>et al.</i>, 2009<sup>9</sup>; Griffin <i>et al.</i>, 2012<sup>10</sup>; EGL2, 2024<sup>6</sup>). Therefore, potential impacts associated with cable laying activities will be somewhat limited to direct disturbance of the seabed rather than potential effects within the water column. The EGL2 project presented this information to the MMO in detail, showing the limited spatial scale of indirect effects (EGL2, 2024<sup>6</sup>).</p> <ul style="list-style-type: none"> <li>In response to IHLS Abundance data comments: <p>It is acknowledged that the IHLS abundance data may be interpreted more easily if shown for individual years, however for the purposes of the <b>Heat Mapping Report</b> [AS-105], the AbSmall data was plotted as a visual guide to show the proposed cable corridor in the context of the key spawning grounds for Atlantic herring. Adding figures for each year was considered to add significant length to the report, without providing additional benefit to the objectives of the report and in terms of delivery by 28<sup>th</sup> November 2024.</p> <ul style="list-style-type: none"> <li>a) The larval count data has been presented as larvae per m<sup>2</sup>, labelled as "Larvae Count" within the figure.</li> <li>b) The MMO and Cefas have previously indicated that larval abundance values &gt;50 larvae per m<sup>2</sup> indicate substantial spawning activity, therefore there is no additional benefit to showing values between 600-6,000 separately. The Applicants would like the MMO to clarify whether the &gt;600 larvae per m<sup>2</sup> category consists of anything other than high abundance that would warrant a change to the figure's legend, and if so, what the updated categories should be; bearing in mind the intention of the display of IHLS abundance data in this report as an indicator of spawning activity.</li> </ul> <p>The Applicants have requested a meeting with the MMO and Cefas to discuss the assessment and are awaiting a response.</p> </li> </ul> |
| REP2-061:25 | <p>2.2.11 The MMO thanks the Applicant for providing PSA data for the ECC (Table 2-1) as this is helpful to understand the site-specific sediment composition. Nonetheless, as outlined above, there are several gaps in the Applicant's approach which need to be addressed before explicit egg development and yolk-sac</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>No response is required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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<sup>7</sup> Messieh, S.N., Peterson, R.H. and Wildish, D.J. (1981). Possible impact from dredging and spoil disposal on the Miramichi Bay herring fishery. Biological Station. In: Stevenson, D.K. and Scott, M.L., 2005. Essential fish habitat source document. Atlantic herring, *Clupea harengus*, life history and habitat characteristics. NOAA

<sup>8</sup> Kiørboe, T., Frantsen, E., Jensen, C. and Sørensen, G. (1981). Effects of suspended sediment on development and hatching of herring (*Clupea harengus*) eggs. Estuarine, Coastal and Shelf Science, 13(1): pp. 107-111.

<sup>9</sup> Griffin, F.J., Smith, E.H., Vines, C.A. and Cherr, G.N. (2009). Impacts of suspended sediments on fertilization, embryonic development, and early larval life stages of the Pacific herring, *Clupea pallasii*. The Biological Bulletin, 216(2): pp. 175-187

<sup>10</sup> Griffin, F.J., DiMarco, T., Menard, K.L., Newman, J.A., Smith, E.H., Vines, C.A. and Cherr, G.N. (2012). Larval Pacific herring (*Clupea pallasii*) survival in suspended sediment. Estuaries and Coasts, 35: pp. 1229- 1236.

| I.D.        | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|             | absorption periods can be confidently and evidentially defined for use in a back-calculation exercise for the Project ECC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| REP2-061:26 | <p>2.2.12 The Applicant should recognise that whilst the Project ECC and EGL2 are being developed in isolation of each other, both run through the Flamborough Head herring spawning ground and are not the only cable developments to do so. There has been a large increase in the number of offshore developments in recent years, particularly in the Central North Sea in the vicinity of the Banks herring spawning ground off Flamborough head. If the Project ECC and EGL2 were the only anthropogenic activity happening at the Flamborough Head herring spawning ground during the Banks herring spawning season off Flamborough Head, then concerns of significant impacts to herring spawning habitat and the Banks herring population overall would be more measured. However, there are multiple offshore developments (e.g. EGL2, EGL3, EGL4, Hornsea Project Four, and Dogger Bank A and B to name just a few) that are also planned or under construction in the same area off Flamborough Head which also have high potential to cause disturbance to herring spawning activities and herring spawning habitat over multiple years, all of which need to be managed through suitable mitigation measures or an appropriate schedule of works outside the Banks herring spawning season. The impacts of all activities must be considered and assessed as a whole. For this reason, <b>the MMO maintains the requested temporal restriction on works which interact with the seabed along the ECC route (including seabed preparatory works, cable trenching etc.) during the Banks herring spawning season (1 August – 31 October inclusive), and that this restriction should apply to both construction and maintenance activities.</b></p> | <p>A cumulative impact assessment has been undertaken within <b>Chapter 10 Fish and Shellfish Ecology</b> [APP-091] to assess this risk. All impacts with the potential for cumulative effects when considering relevant schemes with spatial/temporal overlap or proximity with the Projects were considered within this assessment. All impacts assessed were identified as having negligible or minor adverse effect, which is not significant in EIA terms.</p> <p>In light of the findings of this assessment, the application of a blanket 3 month period restriction on works – unsupported by evidence - is not considered proportional to the potential risk from cable laying activities within the spawning ground off Flamborough Head. This is due to the extent of potential spawning habitat within the region, the comparatively limited spatial and temporal extents of cable laying activities, and the timing of peak spawning for the Banks population in this region occurring within September only (EGL2, 2024<sup>6</sup>).</p> <p>In addition, exclusion of any maintenance activities for 3 months is not feasible as there is potential for remedial works to be required at any time and this timing cannot be predicted. Any remedial works would be spatially and temporally limited, affecting a much smaller footprint than construction. Exclusion of maintenance activities could risk shut down of some or all of the Projects or lead to small issues developing into significant ones. With the Projects designed to power 3 million homes, an unremedied fault could affect grid security and carbon targets.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| REP2-061:27 | <p>2.2.13 Should the Applicant wish to temporally or spatially refine any of the recommended restrictions, the MMO requests the Applicant request the MMO to provide further advice to ensure the information provided will provide the evidence to remove a restriction. This would include a step-by-step instructions on the evidence required and process to follow on how to perform back-calculation exercise for the Project. It should also be noted that any spatial refinement is applicable to the temporal restriction on works which interact with the seabed along the ECC route only.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>Based on the information presented in the <b>Heat Mapping Report: Atlantic Herring and Sandeel</b> [AS-105], <b>Chapter 10 Fish and Shellfish Ecology</b> [APP-091], and this response document, the Applicants maintain the position that cable-laying activities result in a non-significant effect upon Atlantic herring.</p> <p>The extent of potential spawning habitat that may be disturbed by cable laying activities within the Offshore Export Cable Corridor is unlikely to result in any significant reduction in potential spawning habitat. Given the temporary nature of seabed disturbance associated with cable-laying activities, it is expected that disturbed spawning habitat would return to a state suitable for spawning within one spawning cycle. Therefore, when considering cumulative effects, no impact pathway exists for the long-term reduction in the extent of potential spawning habitat.</p> <p>Given that the IHLS temperature recorded within the Offshore Export Cable Corridor is consistently &gt;13°C (as discussed in REP2-061:24), the egg and larval development period based upon Russell (1976) (and references therein) is expected to be &lt;10 days as stated in the <b>Heat Mapping Report</b> [AS-105] (&lt;7 days for egg development and &lt;3 days for yolk sac absorption at temperatures &gt;12.8°C).</p> <p>As described by the ELG2 project (EGL2, 2024<sup>6</sup>), the peak spawning period for the Banks population off Flamborough Head occurs between 16<sup>th</sup>-30<sup>th</sup> September, based upon historic and current IHLS data. It is noted that the EGL2 project is located to the north of the Projects' Offshore Export Cable Corridor, where water temperatures are slightly cooler (&gt;12°C). Using a similar rationale, but adapted with inputs specific to temperatures of &gt;13°C, the back-calculation of the key period of eggs on the seabed is as follows:</p> <p>The precautionary earliest start date of egg laying based on 2008 IHLS larval length outliers (8mm caught on the 23<sup>rd</sup> September) is the 23<sup>rd</sup> September minus 12 days for larval growth between 5mm (at hatching) and</p> |

| I.D.        | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 8mm (based on a 0.25mm per day growth rate) minus 3 days yolk absorption period – 7 days egg development period = 22 days prior to the 23 <sup>rd</sup> September = the <b>1<sup>st</sup> September</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| REP2-061:28 | 2.2.14 In a similar vein to EGL2, seabed preparation works and cable installation activities associated with the ECC will impact the immediate surrounding habitat of the works. The same cannot be said for the effects of UWN which disperse widely into the environment. Given the location of the Project, the inwards and southward migration of Banks herring must also be considered and so any temporal and spatial refinements must still be inclusive of the periods before and after spawning when gravid herring to migrate from/to their spawning grounds, and not just cover the 'peak of spawning activity'. This buffer period before and after spawning is essential and must be applied at the start and end of the 'peak of spawning activity' to allow sediments to settle and spawning to take place.                                                                                                                                                                                          | <p>Despite the location of the Projects' Array Areas to the east of the Flamborough Head spawning grounds, there is potential for underwater noise to extend within the spawning grounds as described in the <b>Heat Mapping Report</b> [AS-105].</p> <p>However, there is ample space to enable adult Atlantic herring spawning aggregations to migrate through the spawning grounds due to the distance between the TTS boundary and the coastline (which is approximately 70km at the closest point). The MMO's comment (2.2.14) is likely to relate to the 135dB behavioural disturbance threshold, which the Applicants maintain is not fit for purpose for use within EIAs for Atlantic herring - a position which is in line with that of the key authors on this topic (Hawkins and Popper, 2014<sup>4</sup>; Hawkins <i>et al.</i>, 2014<sup>3</sup>; Popper <i>et al.</i>, 2014<sup>5</sup>). See response to REP2-061:22.</p> <p>It is noted that the fishing industry actively targets gravid females within this area, representing a substantially greater barrier to migration and spawning success than would result from the production of sound during piling within the Projects' Array Areas; yet no spatial or temporal restrictions are imposed for the Atlantic herring fishing industry in this location during the spawning period.</p> |
| REP2-061:29 | 2.2.15 What the Applicant is proposing is a complex issue which should be approached with caution. This approach method was not developed for the EGL2 project but has been used on a case-by-case basis for a select number of offshore developments over a number of years. This approach requires careful interrogation of IHLS data and peer-reviewed literature, with guidance from our scientific advisors.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | The Applicants recognise the need for detailed assessment of Atlantic herring given the location of the cable corridor within a spawning ground, hence the production of the <b>Heat Mapping Report</b> [AS-105] as a supplement to the assessments made within <b>Chapter 10 Fish and Shellfish Ecology</b> [APP-091]. The Applicants remain committed to engaging further with MMO in relation to this matter. As such, the Applicants await a response to a request for a meeting to discuss this matter more fully in order to find an agreed way forward.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| REP2-061:30 | <p><u>Removal of the ESP from the ECC and Updated UWN modelling.</u></p> <p>2.2.16 Removal of the ESP from the Projects' Design Envelope means that piling (pin piling) within the offshore export cable corridor is no longer required. The Applicant has provided updated underwater noise modelling in Appendix 11-3 - Underwater Noise Modelling Report (AS-138), the Heat Mapping Report: Atlantic Herring and Sandeel (AS-105) and in the Fish and Shellfish Environmental Assessment Update (AS-142). The removal of the ESP from the offshore export cable corridor is positive as it removes the need for piling to be carried out within an area of high potential herring spawning habitat near Flamborough Head.</p>                                                                                                                                                                                                                                                                                    | No response is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| REP2-061:31 | 2.2.17 The unmitigated impact ranges for TTS and behavioural impacts in herring still overlap a significant area of high and very high potential herring spawning habitat., this is duplicated from the updated Heat Mapping Report, UWN at a level which would produce behavioural impacts overlaps a large area of the main Flamborough Head spawning ground. The Applicant should note that behavioural impacts have the potential to disturb adult herring engaged in spawning at the spawning ground and deter adult herring migrating towards the spawning ground and it was raised in the previous responses that UWN impacts to herring should be appropriately mitigated. The Applicant has not provided any further information as to how they might mitigate UWN disturbances. For this reason, the MMO maintain that <b>it is necessary to recommend a temporal restriction on all piling and UXO clearance activities during the Banks herring spawning season (1 August – 31 October inclusive)</b> . | <p>As stated in response to REP2-061:22 above, the authors of the relevant papers do not consider the 135dB behavioural threshold appropriate for the assessment of potential impacts of underwater noise for sprat, let alone for Atlantic herring (Hawkins and Popper, 2014<sup>4</sup>; Hawkins <i>et al.</i>, 2014<sup>3</sup>). This was made clear in a memo submitted to the MMO dated 2<sup>nd</sup> November 2023 (see <b>Appendix B</b>), alongside several discussions held between the Applicants and the MMO.</p> <p>When using the industry standard for assessing the potential for a significant effect from TTS (Popper <i>et al.</i>, 2014<sup>5</sup>), the IHLS data shows that the overlapping potential spawning habitat is not highly productive (consistently 1-50 larvae per m<sup>2</sup> with an isolated sample of 50-200 larvae per m<sup>2</sup> north of KP90 – refer to Figure 2.7 of the <b>Heat Mapping Report</b> [AS-105]), and therefore the sound produced during piling activities is highly unlikely to result in any significant effect to the North Sea Autumn Spawning Atlantic herring population.</p>                                                                                                                                                                                                               |

| I.D.        | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| REP2-061:32 | <b>3. Additional MMO comments</b><br><b>3.1 DCO/DML comments</b><br>3.1.1 The MMO is currently reviewing a number of conditions with MCA, TH and UKHO to ensure there is a standard across all cases in examination and will provide an update to the Applicant and ExA as soon as these have been agreed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | The Applicants await the MMO's further comments in due course.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| REP2-061:33 | 3.1.2 Due to updates to the Marine Noise Registry the MMO will be requesting updates to Condition 26 Reporting of impact pile driving in due course.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | The Applicants await the MMO's further comments in due course.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| REP2-061:34 | <b>3.2 Other Documents</b><br>3.2.1 The MMO is still reviewing the following documents and will provide comments at Deadline 3 alongside comments on relevant documents submitted at Deadline 2: <ul style="list-style-type: none"> <li>REP1-010 - 7.5 Environmental Statement Chapter 5 – Project Description (Tracked) (Revision 3)</li> <li>REP1-022 - 7.25.25.3 Environmental Statement Appendix 25-3 Construction Noise Assessment (Revision 2) (Tracked)</li> <li>REP1-059 – Historic England – Written Representation</li> <li>REP1-060 – Maritime and Coastguard Agency – Written Representation</li> <li>REP1-063 – Natural England – Deadline 1 Submission</li> <li>REP1-064 – Natural England - Appendix B1 - Natural England's comments and updated advice on 10.38 Coastal Erosion Technical Note [AS-116, Rev. 01]</li> <li>REP1-065 - Appendix H1 - Natural England's Advice on Seabird Compensation Calculations Ornithology</li> <li>REP1-077 - National Federation of Fishermen's Organisations – Written Representation</li> <li>REP1-087 – RSPB – Written Representation</li> <li>REP1-088 – The Wildlife Trust - Written Representation</li> </ul>                                                                                                                                                                                                       | No response is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| REP2-061:35 | <b>3.3 In Principle Monitoring Plan (APP-247)</b><br>3.3.1 The MMO would like further information included within the IPMP.<br>3.3.2 The MMO is currently undertaking a project on the standardisation of offshore wind post-consent monitoring data. This project aims to standardise the collecting and reporting of offshore wind environmental monitoring data in English waters, for receptors/monitoring techniques where a widely recognised standard for monitoring already exists, and to implement this approach in post-consent monitoring for wind farms in English waters.<br>3.3.3 The MMO has engaged a range of stakeholders, including SNCB's, industry, and Renewable UK to identify standards, and are currently finalising a list of agreed standards across six receptors: marine mammals, underwater noise, ornithology, fish and shellfish, benthic and geophysical monitoring.<br>3.3.4 This will make it easier to compare and collate monitoring data from different projects, and ensure we get the most value out of monitoring. It will also ensure that developers know what is expected of them in terms of monitoring and add weight to previously agreed standards (e.g. Natural England's Best Practice Guidance). Standardisation will only be applied where an agreed standard already exists, and standardisation will deliver benefits. | <p>The Applicants will add a general commitment to an update of the <b>In Principle Monitoring Plan (IPMP) (Revision2)</b> [REP2-043] to be submitted at Deadline 4 which notes that any standards or best practice adhered to during monitoring will be clearly outlined clearly within the relevant monitoring reports. A note will be added to state that the recommendations of MMO's Standardisation of Offshore Wind Post-Consent Monitoring (forthcoming) will be considered where applicable.</p> <p>As stated by the MMO, the actual standards are not yet public and therefore the Applicants reserve their opinion on the suitability of implementing them for the Projects. In addition, it is not clear if the MMO's intention is to ensure that a) all projects undertake the same monitoring for all of the six receptor groups, irrespective of the potential impacts from a specific project and irrespective of any conclusion on significant effects or b) if this is simply to standardise methods for monitoring in those cases where significant effects are predicted and monitoring required. It would be useful for MMO to clarify this point.</p> |

| I.D. | MMO Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Applicants' Response |
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|      | <p>3.3.5 The final list of standards is expected to be agreed in 2025. These will then become the default approach to post-consent monitoring of these receptors. We request that the IPMP be updated to reference this project, where any of these 6 receptors are applicable. The project can be referenced as (MMO Standardisation of Offshore Wind Post-Consent Monitoring, forthcoming). The MMO also requests that the IPMP include a general commitment to ensuring that any standards or best practice adhered to during monitoring, is outlined clearly within the relevant monitoring reports.</p> <p>3.3.6 The MMO aims to engage with the Applicant to ensure that this reference is included, and agreement can be made prior to the end of examination.</p> |                      |

## 2.3.2 The Applicants' responses to the MMO's comments relating to the DCO and DMLs

5. **Table 2-4** presents the Applicants' responses to the MMO's comments relating to the Development Consent Order (DCO) and Deemed Marine License (DML) (Annex 1, Table 1 of Deadline 2 Submission [REP2-o61]):
6. Within **Table 2-4**, the Applicants have not included responses to items where the MMO have provided no material comments or have indicated that a response to / comments on a document will be provided later in the examination process. In line with this approach, no specific responses have been provided to the following Deadline 2 submissions:
- Deadline 2 Summary [REP2-o62]; and
  - Written Representation [REP2-o63].

**Table 2-4 The Applicants' Response to MMO's Deadline 2 Documents – Annex 1 [REP2-o61]**

| I.D.        | Main DCO                                   |                                                                                                                                            | MMO Comments                                                                                                                                                                                                                                                              | Applicant Comments                                                                                                                                                                                                                                                                                                                                   | Deadline 2 Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Applicants' Response                                                                                                                                                                                                                                                                                                                           |
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| REP2-061:A1 | Part 1 – Preliminary Interpretation (2)(1) | “building” includes any structure or erection or any part of a building, structure or erection;                                            | Please can the Applicant confirm that 'building' does not include any offshore structures, and therefore that the protective works to building schedule does not apply to offshore structures.                                                                            | The definition of "building" could apply to offshore structures. If the MMO have any concerns with this approach, the Applicants request that further details be provided.<br><br>The definition of "building" and the terms of Article 17 are well precedented, and commonly included in DCOs                                                       | The MMO does not believe that any offshore works are included in Article 17 therefore it should be made clear within the interpretation that “building” only refers to onshore works.                                                                                                                                                                                                                                                                                                                                | The Applicants have reviewed the use of the word “building” in the <b>Draft Development Consent Order (DCO) (Revision 6)</b> [document reference 3.1] and can confirm that it is only used in the context of buildings that are located onshore. However, the definition of “building” is well precedented and it is not proposed to amend it. |
| REP2-061:A6 |                                            | “MHWS” or “mean high water springs” means the highest level that spring tides reach on average over a period of time;                      | The MMO request the definition is updated to:<br><br>'The height of Mean High-Water Springs (MHWS) is the average throughout the year, of two successive high waters, during a 24-hour period in each month when the range of the tide is at its greatest (Spring tides). | This definition is well precedented and commonly included in DCOs.<br><br>No change to the <b>Draft DCO</b> [APP-027] is proposed.                                                                                                                                                                                                                   | The MMO does not agree that ‘ <i>well precedented and commonly included in DCOs</i> ’ provides enough justification for not updating the definition. The MMO notes that previous DCOs may have similar definitions, however upon review, the definition has been expanded to provide further clarity as MHWS does change over time. The updated definition allows all parties to be clear what MHWS is and this is reflected. The MMO’s maintains the position that there should be clarity on the ‘period of time’. | The Applicants have updated the definition of “MHWS” in the <b>Draft DCO (Revision 6)</b> [document reference 3.1] and also made associated changes as a result of the updated definition.                                                                                                                                                     |
| REP2-061:A7 |                                            | “undertaker” means, subject to article 5 (benefit of Order),— (a) for the purposes of constructing, maintaining and operating the DBS East | The undertaker definition must be updated. This should exclusively be the named companies (RWE Renewables UK Dogger Bank South (East) Limited, company reference number 13656240 and RWE Renewables UK Dogger Bank South                                                  | The Applicants disagree that transfers of the DMLs should be by the provisions of section 72 of the Marine and Coastal Access Act (MCAA) 2009. Where a transfer of a DML is proposed, the SoS would be looking at that in the context of all the provisions of the DCO. There are some Articles and Requirements relating to offshore matters within | The MMO acknowledge the Applicants comments however still maintains that reference to the DMLs in Article 5 should be removed. Please see section 1.2 for more information.                                                                                                                                                                                                                                                                                                                                          | Please see the Applicants' responses to <b>Table 2-3</b> above (REP2-061.3 to REP2-061.12).                                                                                                                                                                                                                                                    |

| I.D.         | Main DCO                                          | MMO Comments                                                                                                                                                                                                         | Applicant Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Deadline 2 Comments                                                                                                                                                       | Applicants' Response                                                                        |
|--------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
|              |                                                   | works and any related ancillary works, DBSEL; (b) for the purposes of constructing, maintaining and operating the DBS West works and any related ancillary works, DBSWL; and (c) in any other case, DBSEL and DBSWL; | <p>(West) Limited, company reference number 13656525,).</p> <p>In addition, the Applicant should remove 'subject to article 5' (benefit of the order).</p> <p>The above updates should also be made to the DBSEL and DBSWL definitions.</p> <p>the DCO which overlap with the DMLs. In that context, it is entirely appropriate that the SoS has the ability to approve the transfer of a DML. Article 5(14) confirms that section 72(7) and (8) (variation, suspension, revocation and transfer) of the 2009 Act does not apply to a transfer of the DMLs falling within Article</p> <p>5. Section 72(7) permits the licensing authority to transfer a marine licence to another person. Section 72(8) provides that "a licence may not be transferred except in accordance with subsection 7". Article 5 however provides for a transfer to take place in a different way to section 72(7). Since Article 5 is different from the precise wording of section 72(7) of the 2009 Act it is necessary to specify that section 72(7) only applies to a transfer not falling within Article 5 in order to enable Article 5 to operate. Without specifying this, Article 5 might be claimed to be inoperative because of adopting a different wording from section 72(7).</p> <p>The Applicants also note that this approach is aligned with "good practice point 11" in the Planning Inspectorate Advice Note 15: drafting Development Consent Orders (2018), which states that "Applicants should give careful consideration to the terms of the transfer Article they include in their draft DCO so as to ensure that it reflects how they envisage the NSIP being operated post-consent and, if possible, avoid potential inconsistencies between how DCO and DML transfer arrangements would operate." The Applicants' approach is intended to ensure that inconsistencies in the transfer arrangements do not arise.</p> |                                                                                                                                                                           |                                                                                             |
| REP2-061:A11 | Part 2 – Principal powers<br>Benefit of the order | Please see section 3.3.1 in this document for further information                                                                                                                                                    | <p>Please see section 3.3 in this document for further information.</p> <p>For the reasons set out below, the Applicants do not agree with the removal of the parts of Article 5 of the <b>Draft DCO</b> [APP-027] requested by the MMO.</p> <p>Paragraph (14) of Article 5 disapplies sections 72(7) and (8) of the Marine and Coastal Access Act 2009 in relation to a transfer or grant of the benefit of a Deemed Marine Licence (DML). The drafting is</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | The MMO acknowledges the Applicant's comments however still maintains that reference to the DMLs Article 5 should be removed. Please see section 1.2 for more information | Please see the Applicants' responses to <b>Table 2-3</b> above (REP2-061.3 to REP2-061.12). |

| I.D. | Main DCO | MMO Comments | Applicant Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Deadline 2 Comments | Applicants' Response |
|------|----------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------|
|      |          |              | <p>based on the Model Provisions and reflects a long-established precedent regarding the transfer of DCO powers and DMLs that has been endorsed by the Secretary of State (SoS) many times, including most recently in the Sheringham Shoal and Dudgeon Extensions DCO. Where a transfer of the DML is sought under Article 5, the SoS would consider the appropriateness of the party to whom the transfer or grant is proposed and would also take into account any representations made by the MMO before determining whether to grant consent, noting that Article 5 (paragraphs (6) and (9)) includes provisions requiring notification and consultation with the MMO where a transfer or grant of the benefit of a DML is proposed.</p> <p>From a procedural perspective, it is important that the DCO and any DML can be transferred together using the process set out in Article 5. It is considered important that the timing of any transfer or grant of powers/ authorisations under the DCO and a DML be aligned, as there is considerable overlap between the authorisations and the requirements/conditions. This justifies a departure from the procedure under the Marine and Coastal Access Act 2009. Having deemed the marine licence in the DCO, it is also appropriate that any transfer under the Order include the DML as part of the wider transfer- it is one element of the wider order powers and should not be separated out from the authority to construct, operate and maintain the Nationally Significant Infrastructure Project (NSIP) granted by the Order.</p> <p>The PA 2008 is clear that marine licences may be deemed in a DCO in appropriate areas (s149A) and that a DCO may include such further provisions ancillary to the operation of that DML (s122(3)), including transfer of the benefit. Section 122(5)(a) and (c) set out that a DCO may "apply, modify or exclude a statutory provision which relates to any matter for which provision may be made in the order" or "include any provision that appears to the Secretary of State to be necessary or expedient for giving full effect to any other provision of the order". The ability to transfer a</p> |                     |                      |

| I.D.         | Main DCO                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | MMO Comments                                   | Applicant Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Deadline 2 Comments                                                                                                                                                                                                                                                                                                | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|              |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                | <p>DML is related to the deeming and it is therefore a sensible, expedient part of the wider power to transfer the benefit of the order.</p> <p>Overall, the drafting of this article reflects the equivalent provision in recent offshore wind DCOs including Hornsea Three, Norfolk Boreas, Norfolk Vanguard, East Anglia One North, East Anglia Two, Awel y Mor, Hornsea Four and Sheringham Shoal and Dudgeon Extensions. As noted above, this article is necessary to provide the Applicants with the appropriate commercial freedom to sell or lease the authorised projects while ensuring that the SoS can control such sale or lease through the need to obtain their consent.</p> |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| REP2-061:A15 | Part 7<br>Miscellaneous and general Application of landlord and tenant law | 36.<br>—(1) This article applies to— (a) any agreement for leasing to any person the whole or any part of the authorised project or the right to operate the same; and (b) any agreement entered into by the undertaker with any person for the construction, maintenance, use or operation of the authorised project, or any part of it; so far as the agreement relates to the terms on which any land that is the subject of a lease granted by or under that agreement is to be provided for that person's use. (2) No enactment or rule of law regulating the rights and obligations of landlords and tenants prejudices the | Please confirm this is for onshore works only. | This wording is well precedented, and commonly included in DCOs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | The MMO does not agree that 'well precedented, and commonly included in DCOs' provides enough justification for not updating the DCO or providing clarity on what elements are only for the Offshore works. The MMO notes that previous DCOs may have Articles or Requirements but requires further justification. | The Applicants acknowledge the MMO's comments. The intention of Article 36 is that it would apply to the onshore elements of the Projects. It is not thought that it would be necessary for Article 36 to apply to offshore elements i.e. to an agreement for lease or lease from the Crown Estate. However, given that the current wording is based on the model provisions and well precedented in DCOs, the Applicants do not propose to update the drafting. |

| I.D.         | Main DCO                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MMO Comments                                                                                                                                                                                      | Applicant Comments                                                                                                                                                                                                                           | Deadline 2 Comments                                                                                                                            | Applicants' Response                                                                                                                              |
|--------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
|              |                               | operation of any agreement to which this article applies. (3) Accordingly, no such enactment or rule of law applies in relation to the rights and obligations of the parties to any lease granted by or under any such agreement so as to— (a) exclude or in any respect modify any of the rights and obligations of those parties under the terms of the lease, whether with respect to the termination of the tenancy or any other matter; (b) confer or impose on any such party any right or obligation arising out of or connected with anything done or omitted on or in relation to land that is the subject of the lease, in addition to any such right or obligation provided for by the terms of the lease; or (c) restrict the enforcement (whether by action for damages or otherwise) by any party to the lease of any obligation of any other party under the lease. |                                                                                                                                                                                                   |                                                                                                                                                                                                                                              |                                                                                                                                                |                                                                                                                                                   |
| REP2-061:A25 | Part 2<br>Approval of matters | Further information 3.—<br>(1) In relation to any application referred to in paragraph 2, the discharging authority                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.11.1 The MMO has provided detailed comments in Table 1 below. Please find a summary of the main concerns below. Determination dates: The MMO strongly considers that it is inappropriate to put | 3.11.1 The Applicants have responded to the MMO's detailed comments in Table 1 below and 3.11.3 The Applicants require certainty that the discharge of conditions under the DMLs will not cause undue delay to the delivery of the Projects. | The MMO welcomes that documents will be submitted six months before the intended commencement of licensed activities. In relation to Condition | The Applicants acknowledge the MMO’s comments and maintain their position on condition 15(5) as set out in<br><b>The Applicants’ Responses to</b> |

| I.D. | Main DCO                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | MMO Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Applicant Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Deadline 2 Comments                                                                              | Applicants' Response                                      |
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|      | specified in requirements<br><br>Further Information | may request such further information from the undertaker as it considers necessary to enable it to consider the application. (2) If the discharging authority considers that further information is necessary, and the requirement concerned contained in Part 1 of this Schedule does not specify that consultation with a consultee is required, the discharging authority must, within ten days of receipt of the application, notify the undertaker in writing specifying the further information required. (3) If the requirement concerned contained in Part 1 of this Schedule specifies that consultation with a consultee is required, the discharging authority must issue the application to the consultee within five working days of receipt of the application and notify the undertaker in writing specifying any further information requested by the consultee within five working days of receipt of such a request. (4) If the discharging authority does not give the notification within | <p>timeframes on complex technical decisions of this nature. The time it takes the MMO to make such determinations depends on the quality of the application made, the complexity of the issues and the amount of consultation the MMO is required to undertake with other organisations to seek resolutions.</p> <p>3.11.3 The MMO's position remains that it is inappropriate to apply a strict timeframe to the approvals the MMO is required to give under the conditions of the DML, given this would create disparity between licences issued under the DCO process and those issued directly by the MMO, as marine licences issued by the MMO is not subject to set determination periods. This applies for the following conditions:</p> <ul style="list-style-type: none"> <li>Extension of time Periods (condition 8 on DML 1 and 2, condition 6 on DML 3 and 4 and condition 4 on DML 5)</li> <li>Pre -construction plans and documentation (condition 15 on DML 1 and 2, condition 13 on DML 3 and 4 and condition 11 on DML 5)</li> <li>Site integrity plans (condition 16 on DML 1 and 2 and condition 14 on DML 3 and 4).</li> </ul> <p>3.11.4 Whilst the MMO acknowledges that the Applicant may wish to create some certainty around when it can expect the MMO to determine any applications for an approval required under the conditions of a licence, and whilst the MMO acknowledges that delays can be problematic for developers and that they can have financial implications, the MMO stresses that it does not delay determining whether to grant or refuse such approvals unnecessarily. The MMO makes these determinations in as timely a manner as it is able to do so.</p> | <p>The Applicants note that, whilst the MMO is not subject to set determination periods for the discharge of conditions for marine licences issued by the MMO, the MMO does aim to make a decision on most marine licence applications within 13 weeks of an application being validated. It would therefore seem reasonable that the MMO is able to make a decision on the discharge of conditions within a period double that length. The Applicants therefore submit that six months is a reasonable amount of time for the MMO to determine any approvals sought, noting that the provisions of the DMLs (condition 8 on DML 1 and 2, condition 6 on DML 3 and 4 and condition 4 on DML 5) do allow for an alternative timeframe to be agreed between the MMO and the undertaker, which could be utilised in the unlikely event that six months was not sufficient in individual cases.</p> <p>3.11.4 The Applicants welcome the MMO's confirmation that it does not delay determining whether to grant or refuse such approvals unnecessarily. This supports the Applicants' position that six months should be a sufficient amount of time for such approvals to be considered, noting that an alternative timeframe can be agreed in the unlikely event that six months was not sufficient in individual cases.</p> <p>3.11.2, 3.11.5 and 3.11.6 The Applicants' position is that the submission of certain plans for approval at least four months prior to commencement of operation of licensed activities is appropriate and precedented (for example Hornsea Four and East Anglia One North OWFs). Notwithstanding that, the Applicants welcome that the MMO is open to discussion on this point and will therefore seek to agree the relevant timescales with the MMO and update the Examining Authority (ExA) once those discussions have taken place.</p> | 15(5) the MMO maintains their position and believes this will be a matter for the SoS to decide. | <b>Relevant Representations</b> [PDA-013] (RR-030: 3.11). |

| I.D. | Main DCO | MMO Comments                                                                                                                                                                                                                                                       | Applicant Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Deadline 2 Comments | Applicants' Response |
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|      |          | the period specified in subparagraphs (2) or (3) it (and the consultee, as the case may be) is deemed to have sufficient information to consider the application and is not entitled to request further information without the prior agreement of the undertaker. | 3.11.5 The MMO's view is that it is for the developer to ensure that it applies for any such approval (with all MMO is open to discussion on this point and will therefore seek to agree the relevant timescales with the MMO and update the Examining Authority (ExA) once those discussions have taken place 45 information required) in sufficient time as to allow the MMO to properly determine whether to grant or refuse the application. The MMO believes that if time scales are included within the DML for plans, then these should be 6 months and not 4 months. 3.11.6 However, without prejudice to this position, the MMO is open to discussions on which documents should be 6 months and which documents could be 4 months, in order to take into account the concerns that the Applicant may have. |                     |                      |

#### Schedule 10 Schedule 14 – Deemed Marine Licences

##### Part 1

|              |                                                               |                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| REP2-061:A33 | Part 1 Licensed marine activities Interpretation DML1 - DML 5 | "intrusive activities" means activities including anchoring of vessels, jacking up of vessels, temporary deposits and temporary wet storage areas; | The MMO would like to remind the Applicant that temporary deposits are still licensable. The Applicant should not undertake temporary deposits that are not licensed under a DML. The MMO request the phrase 'temporary deposit' is removed from this definition within the DMLs.<br><br>Can the Applicant confirm where this has been assessed within the ES? | The Applicants would welcome a discussion with the MMO regarding the scope of "temporary deposits" before committing to making this change.                                                                                                                                                                                                                                                                                                  | The MMO welcome the Applicant's response and would welcome written information on this matter prior to a discussion to ensure any discussion is efficient.                                                                                                                                                                                                              | The Applicants have now removed the term "temporary deposits" from the definition of "intrusive activities" in the <b>Draft DCO (Revision 6)</b> [document reference 3.1].                                                                                                                                                                                                                                                           |
| REP2-061:A39 | Part 1 Licensed marine activities Interpretation DML 5        | "undertaker" means DBSEL and DBSWL;                                                                                                                | The MMO request this is updated. Only one company can own the marine licence and be the undertaker. Please also include the company name and registration number.                                                                                                                                                                                              | Company details are provided in the definition of DBSEL and DBSWL.<br><br>Marine Licence 5 relates to cabling inter-linking the two Projects and would be owned jointly by DBSEL and DBSWL. A separate DML has been included in order to allow for the transfer of these transmission assets to an Offshore Transmission Owner in due course.<br><br>The Applicants are not aware of any legal restriction preventing a DML being granted to | The MMO does not know of any DML that has two owners, where joint working is taking place one company has taken ownership of the DML. The MMO understands the reason the Applicant has included DML5 as joint owners however believes joint ownership can cause issues during compliance and enforcement and therefore only one Applicant should be on the DML. The MMO | The Applicants are not aware of any examples where joint undertakers have been included within a DML. If the MMO is unwilling to accept this position then the Applicants would propose adding an additional DML to the <b>Draft DCO (Revision 6)</b> [document 3.1] which would mirror the existing DML5 at Schedule 14. DML5 would then be amended to have one undertaker only and the second undertaker would have the benefit of |

| I.D.         | Main DCO                                                              |                                                                                                                                                                                                                                                               | MMO Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Applicant Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Deadline 2 Comments                                                                                                                                                                                                                                            | Applicants’ Response                                                                                                                                                                                                                                                              |
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|              |                                                                       |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | joint undertakers. No change to the <b>Draft DCO</b> [APP-027] is proposed.                                                                                                                                                                                                                                                                                                                                                                                                     | does not allow more than one undertaker on any marine licence and as per PINS Advice note 11 – Annex B this would not align with other marine licences. The MMO requests the Applicant provide evidence of where joint ownership has been accepted by the MMO. | the new DML6. However, the Applicants would like to discuss and agree this approach with the MMO in advance of making this change and will endeavour to have this discussion as soon as possible.                                                                                 |
| REP2-061:A43 | Part 1 Licensed marine activities Interpretation<br><br>DML3 and DML4 | under article 42“outline offshore operations and maintenance plan” means the document certified as the outline offshore operations and maintenance plan by the Secretary of State under article 42 (certification of documents and plans, etc.) of the Order; | Please delete ‘under article 42’ as this appears to be an error.                                                                                                                                                                                                                                                                                                                                                                                                                     | The Applicants acknowledge this comment and will make appropriate updates to the <b>Draft DCO</b> [APP-027] to address the point raised by the MMO and submit an updated <b>Draft DCO</b> [APP-027] for Deadline 1.                                                                                                                                                                                                                                                             | The MMO notes this change has not been reflected in the <b>DCO</b> (REP1-005).                                                                                                                                                                                 | The reference to Article 42 that remains in the definition of “outline offshore operations and maintenance plan” is correct. All references to certified documents within definitions were updated to ensure a consistent approach in the <b>Draft DCO (Revision 3)</b> [AS-120]. |
| Part 2       |                                                                       |                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                   |
| REP2-061:A48 | Design Parameters                                                     | DML 1: Condition 1 - Condition 5<br>DML 2: Condition 1 – Condition 5<br>DML 3: Condition 1 – Condition 3<br>DML 4: Condition 1 – Condition 3                                                                                                                  | The MMO requests the wording of these conditions are updated to ensure they are enforceable by changing ‘may’ to ‘will’ or by stating ‘must not be higher’ etc. for all conditions.                                                                                                                                                                                                                                                                                                  | The Applicants acknowledge this comment and will make appropriate updates to the <b>Draft DCO</b> [APP-027] to address the point raised by the MMO and submit an updated <b>Draft DCO</b> [APP-027] for Deadline 1.                                                                                                                                                                                                                                                             | The MMO welcomes the applicants changes however notes: 2 (2) <i>No wind turbine generator piled monopile foundation may have a pile diameter exceeding 15 metres</i> still contains the word “may”. The MMO requests that this is updated.                     | The Applicants thank the MMO for highlighting this omission and have updated the <b>Draft DCO (Revision 6)</b> [document reference 3.1] accordingly.                                                                                                                              |
| REP2-061:A51 | Phases of the authorised Scheme                                       | DML 1: Condition 6<br>DML 2: Condition 6<br>DML 3: Condition 4<br>DML 4: Condition 4<br>DML 5: Condition 2                                                                                                                                                    | The MMO requests the wording is updated to:<br><br>(1) The authorised scheme must not commence until a written scheme setting out the phases of construction of the authorised scheme has been submitted to and approved in writing by the MMO.<br><br>(2) The authorised scheme must be submitted at least 6 months prior to the proposed commencement of the works.<br>(3) Any subsequent amendments to the written scheme submitted for approval under sub -paragraph (1) must be | The principle of a time period for submission of the written scheme is acceptable to the Applicants. However, the Applicants propose a four month time period is included in the new sub-paragraph (2). The Applicants will update the <b>Draft DCO</b> [APP-027] on this basis. The Applicants will also update the <b>Draft DCO</b> [APP-027] to refer to this scheme as the "Offshore Works Phasing Scheme" and submit an updated <b>Draft DCO</b> [APP -027] at Deadline 1. | The MMO welcomes the Applicant’s comments however does not agree with the four-month time period and maintains that a 6-month time period is suitable as set out in row 25 above.                                                                              | The Applicants have updated the <b>Draft DCO (Revision 6)</b> [document reference 3.1] to include 6 months rather than 4 months in conditions 6/4/2 of the DMLs.                                                                                                                  |

| I.D.         | Main DCO                             |                                                                                                                                                                                                                                                                                                                                                                                                                                 | MMO Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Applicant Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Deadline 2 Comments                                                                                                                                                                                                                                                                                                                                                                                                                            | Applicants’ Response                                                                                                                                                    |
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|              |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>submitted to the MMO for approval in writing’.</p> <p>(4) The written scheme submitted for approval under sub -paragraph (1) must be implemented as approved. The approved details shall be taken to include any amendment that may subsequently be approved by the MMO in accordance with sub -paragraph (2).</p> <p>In addition, the MMO note that the Offshore Works Phasing Scheme will be submitted under the related return for this condition at the post - consent stage. This document should be clearly named in the condition.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                         |
| REP2-061:A52 | Maintenance of the authorised Scheme | <p>DML 1: Condition 7<br/>DML 2: Condition 7<br/>DML 3: Condition 5<br/>DML 4: Condition 5<br/>DML 5: Condition 3</p> <p>This condition as written is not precise or enforceable. The activities authorised under the DML should be limited to those assessed in the ES. The worst-case scenario in the Rochdale envelope should be clearly referenced e.g. the maximum number of cable repairs and replacement activities.</p> | <p>The MMO requests condition 7 is replaced with the following wording: <i>(1) The undertaker may at any time maintain the authorised scheme, except to the extent that this licence or an agreement made under this licence provides otherwise.</i></p> <p><i>(2) Maintenance works include but are not limited to— (a) Bird waste and marine growth removal; (b) Surveys/inspections of cables; (c) Cable remedial burial; (d) Cable protection replenishment; (e) Cable repairs and replacement; (f) Access ladder and boat landing replacement; and (g) Jtube repair/replacement.</i></p> <p><i>(3) XXXX must not commence until an Offshore Operations and Maintenance Plan (OOMP) has been submitted to and approved by the MMO in accordance with the 'Outline Offshore Operations and Maintenance Plan’ in writing. The OOMP must include, but is not limited to — (a) a list of maintenance activities within the marine environment that are planned for the lifetime of the licensed activities; (b) details of the typical construction plant, machinery and personnel requirements for each maintenance activity and any requirements for detailed method statements; (c) details</i></p> | <p>The principle of a time period for submission of the written scheme is acceptable to the Applicants. However, the Applicants propose a four month time period is included in the new sub-paragraph (6). The Applicants will update the <b>Draft DCO</b> [APP-027] on this basis. The list of maintenance works in the MMO's sub- paragraph (2) is more limited than that set out in sub- paragraph (2) of the <b>Draft DCO</b> [APP-027]. While sub- paragraph (2) is non-exhaustive, the Applicants consider that, for clarity, their list should be maintained. The Applicants' approach is precededented in The Hornsea Four Offshore Wind Farm Order 2024. No amendment to sub- paragraph (2) in the <b>Draft DCO</b> [APP-027] is proposed. The details specified in the MMO's sub-paragraph (3) are acceptable to the Applicants, and the Applicants will update the <b>Draft DCO</b> [APP-027] and <b>Outline Offshore Operations and Maintenance Plan</b> [APP - 248] on this basis.</p> | <p>The MMO welcomes the Applicant’s updates and will review in due course.</p> <p>With regard to sub para (2) the MMO acknowledged the Applicants response and agree that the Applicants approach can be used.</p> <p>The MMO is content with sub-paragraph (2) remaining as is. In relation to subparagraph (6) the MMO’s position remains in regards to the timescales being 6 months and this should be reflected within this document.</p> | <p>The Applicants have updated the <b>Draft DCO (Revision 6)</b> [document reference 3.1] to include 6 months rather than 4 months in conditions 7/5/3 of the DMLs.</p> |

| I.D.         | Main DCO                      |                                                                                                                                              | MMO Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Applicant Comments                                                                                                                                                                                                                                                     | Deadline 2 Comments                                                                                                                                                                                                                                                                                                                                                | Applicants' Response                                                                                                                                 |
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|              |                               |                                                                                                                                              | <i>of the typical frequency and timing of each maintenance activity; and</i><br><br><i>(d) details of controls and mitigation that will be in place in order to protect the marine environment. (4 )The OOMP must be reviewed every three years commencing from the date on which the OOMP was approved, unless otherwise agreed by the MMO, to ensure the details of the maintenance activities remain accurate. The conclusions of that review must be submitted to and approved by the MMO in writing. (5)The OOMP must be implemented as approved by the MMO. (6) Unless otherwise agreed in writing with the MMO, the undertaker must submit— (a) the first OOMP at least 6 months prior to the proposed commencement of the works;</i><br><br><i>(b) the updated OOMPs in paragraph (2), at least 6 months before such revised OOMP is required to be put in place; and (c) any updated OOMP covering additional activities as soon as possible after the need for such additional activities is identified.</i> |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                      |
| REP2-061:A53 | Extension of Time periods     | DML 1: Condition 8<br>DML 2: Condition 8<br>DML 3: Condition 6<br>DML 4: Condition 6<br>DML 5: Condition 4                                   | The MMO requests this condition is removed from all the DMLs. Please see comments under 3.11.2-3.11.6 determination dates.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Please see response above. This condition is precededented, for example within the Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024, and the Hornsea Four Offshore Wind Farm Order 2023. No change to the <b>Draft DCO</b> [APP-027] is proposed. | The MMO acknowledges the Applicant's response, the MMO is content on the condition remaining however would request a minor amendment to ensure that any agreement is 'in writing' for audit/enforcement purposes.                                                                                                                                                  | The Applicants have updated the <b>Draft DCO (Revision 6)</b> [document reference 3.1] to include reference to agreement being in writing.           |
| REP2-061:A55 | Notifications and Inspections | DML 1: Condition 9 (1)<br>(b) DML 2: Condition 9<br>(1) (b) DML 3: Condition 7 (1) (b) DML 4: Condition 7 (1) (b) DML 5: Condition 5 (1) (b) | The MMO request this section of the condition is removed. It is the undertaker's responsibility to notify the MMO. This is reflected in the updated Condition (1) (a) wording provided above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | This condition is well precededented, and commonly included in DCOs. No change to the <b>Draft DCO</b> [APP-027] is proposed.                                                                                                                                          | The MMO notes the Applicant's position however there is no ability for those named in (1)(a) to be able to submit something to the MMO on our Marine Case Management System and this is where all the conditions will be located. Therefore, any other submission would not be accepted. It is the Undertakers responsibility to ensure that this is provided, and | The Applicants have updated the <b>Draft DCO (Revision 6)</b> [document reference 3.1] to make clear that this obligation applies to the undertaker. |

| I.D.         | Main DCO |                                                                                                                                | MMO Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Applicant Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Deadline 2 Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                | Applicants' Response                                                                                                                                                                                                                                                                                                                                                          |
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|              |          |                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | the condition should be updated to reflect this.                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                               |
| REP2-061:A56 |          | DML 1: Condition 9 (6)<br>DML 2: Condition 9 (6)<br>DML 3: Condition 7 (6)<br>DML 4: Condition 7 (6)<br>DML 5: Condition 5 (6) | The MMO should be notified upon commencement and completion of any part of the licensed activities, particularly when works are being undertaken in phases. The MMO requests the condition is updated to: (6) The undertaker must inform the MMO Local Office in writing at least 14 days prior to the commencement of the licensed activities or any part of them including providing a programme of works for future activities and within five days of the completion of the licensed activities or any part of them. | The <b>Draft DCO</b> [APP-027] provides for five days prior notice of commencement of licensed activities, rather than the 14 days requested by the MMO.<br><br>Five days' notice is well precedented, and no change to the <b>Draft DCO</b> [APP-027] is proposed.                                                                                                                                                                                                                                                                                                                                                                                                                              | The MMO does not agree that precedent is enough justification for five days' notice to remain. To allow for compliance inspections at relevant stages the local MMO office needs more than five days preparation to ensure compliance checks can be organised and undertaken. This is now standard on all Marine Licences and DMLs generally take longer to prepare for than a Marine Licence. The MMO maintains that this condition should be updated to 14 days. | The Applicants note the MMO's position but propose retaining 5 days, rather than the 14 days requested by the MMO. Due to the nature of the licensed activities, they are influenced by external factors such as the weather and it may not be possible to confirm up to 14 days in advance whether the weather conditions will likely be suitable for mobilisation of works. |
| REP2-061:A58 |          | DML 1: Condition 9 (8)<br>DML 2: Condition 9 (8)<br>DML 3: Condition 7 (8)<br>DML 4: Condition 7 (8)<br>DML 5: Condition 5 (8) | The MMO notes that the notice to mariners are only for works numbers 1A to 8A and 1B to 8B. Can the Applicant confirm why this is not for the other works undertaken under each DML?                                                                                                                                                                                                                                                                                                                                     | This condition is well precedented, and commonly included in DCOs. The condition requires notification prior to the commencement of the authorised scheme or any part thereof. No change to the <b>Draft DCO</b> [APP-027] is proposed.                                                                                                                                                                                                                                                                                                                                                                                                                                                          | The MMO acknowledges the Applicant's comment however does not agree, the MMO notes that for example DML 1 also includes Works 7A and although the condition states, 'at least 14 days prior to the commencement of the authorised scheme or any part thereof' and that Works 7A should be used alongside Works 1A that the condition should include all works within the relevant DML.                                                                             | The Applicants updated the relevant conditions to include Works 7A/B in the <b>Draft DCO (Revision 5)</b> [Rep1-004].                                                                                                                                                                                                                                                         |
| REP2-061:A59 |          | DML 1: Condition 9 (9)<br>DML 2: Condition 9 (9)<br>DML 3: Condition 7 (9)<br>DML 4: Condition 7 (9)<br>DML 5: Condition 5 (9) | The MMO requests the words '(unless otherwise agreed)' is removed from this condition.                                                                                                                                                                                                                                                                                                                                                                                                                                   | This condition is precedented within the Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024.<br><br>The Applicants consider this flexibility is helpful to allow the option for the Applicants and the MMO to agree weekly notifications are not required in certain circumstances, such as during period of the construction period when the on-going construction activities are not changing from week to week.<br><br>This wording requires agreement with the MMO, and therefore the default position is that the undertaker will be required to provide weekly, unless the MMO is satisfied it is unnecessary. No change to the <b>Draft DCO</b> [APP-027] is proposed. | The MMO notes the Applicant's comments and requests that '(or otherwise agreed)' is updated to '(unless otherwise agreed in writing by the MMO)'. The MMO also requests MCA is added to this condition alongside MMO and UKHO.                                                                                                                                                                                                                                     | The Applicants have updated the <b>Draft DCO (Revision 6)</b> [document reference 3.1] to include the requested change.                                                                                                                                                                                                                                                       |

| I.D.         | Main DCO                                 |                                                                                                                                                                                                                                                                                                                                                                                 | MMO Comments                                                                                                                                                                                                                                                                                                                                                                                        | Applicant Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Deadline 2 Comments                                                                                                                                                                                                                       | Applicants' Response                                                                                                                                                                                                                                                                                                                          |
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| REP2-061:A64 | Aviation Safety                          | DML 1: Condition 12<br>DML 2: Condition 12<br>DML 3: Condition 10<br>DML 4: Condition 10<br>DML 5: Condition 8                                                                                                                                                                                                                                                                  | The MMO requests this condition is removed and included in the DCO as the Defence Infrastructure Organisation Safeguarding and Civil Aviation Authority can review this through the DCO requirements.                                                                                                                                                                                               | This condition is well precedented, and commonly included in DCOs. No change to the <b>Draft DCO</b> [APP-027] is proposed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | As above precedent is not enough justification on the inclusion. The MMO believes that this should be within the DCO and not the DML. This was included within the DCO and not the DML on the Norfolk Boreas and Norfolk Vanguard Orders. | The relevant conditions require notifications to be made not only to the Defence Infrastructure Organisation Safeguarding and Civil Aviation Authority but also to the MMO. The Applicants would therefore submit that the DMLs are a more appropriate place for these conditions to be located but are willing to discuss this with the MMO. |
| REP2-061:A68 | Chemicals, drilling and debris           | DML 1: Condition 13 (5)<br>DML 2: Condition 13 (5)<br>DML 3: Condition 11 (5)<br>DML 4: Condition 11 (5)<br>DML 5: Condition 9 (5)<br><br>'The undertaker must ensure that only inert material of natural origin, produced during the drilling installation of or seabed preparation for foundations, and drilling mud is disposed of within the Order limits seaward of MHWS'. | The Applicant should state the name of the disposal site that the material will be deposited in. The MMO is working to designate the disposal sites and will provide an update in due course. See further comments about disposal sites in section 3.14.<br><br>In the event that no activity has taken place during the reporting period the undertaker must provide a null (o) return to the MMO. | The Applicants acknowledge this comment and will make appropriate updates to the <b>Draft DCO</b> [APP-027] to address the point raised by the MMO and submit an updated <b>Draft DCO</b> [APP-027] for Deadline 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | The MMO welcomes the Applicant's updates. The MMO requests a shape file of each disposal site in order to work on designating disposal sites and so these references can be included within the DML.                                      | The Applicants will provide the MMO with the requested shape files.                                                                                                                                                                                                                                                                           |
| REP2-061:A79 | Pre-construction plans and documentation | DML 1: Condition 15 (5)<br>DML 2: Condition 15 (5)<br>DML 3: Condition 13 (5)<br>DML 4: Condition 13 (5)<br>DML 5: Condition 11 (5)<br>The MMO must determine an application for approval made under condition 11 within a period of six months commencing on the date the application is received by the MMO, unless otherwise agreed in                                       | The MMO requests this is removed. It is not appropriate for the determination times to be conditioned. The MMO set their own timescales, and this is dependent upon the quality of the submission and the availability of primary advisors, see comments 3.11.2-3.11.6 for determination dates.<br><br>In addition, the Applicant has referenced the wrong condition within the text.               | 3.11.1 The Applicants have responded to the MMO's detailed comments in Table 1 below and 3.11.3 The Applicants require certainty that the discharge of conditions under the DMLs will not cause undue delay to the delivery of the Projects. The Applicants note that, whilst the MMO is not subject to set determination periods for the discharge of conditions for marine licences issued by the MMO, the MMO does aim to make a decision on most marine licence applications within 13 weeks of an application being validated. It would therefore seem reasonable that the MMO is able to make a decision on the discharge of conditions within a period double that length. The Applicants therefore submit that six months is a | As set out in row 25 above the MMO disagrees with the inclusion of this condition.                                                                                                                                                        | Please the Applicants' response to REP2-061:A25 above.                                                                                                                                                                                                                                                                                        |

| I.D.         | Main DCO |                                                                                          | MMO Comments                                                                                                                                                                                                                                                                                                                                                                                              | Applicant Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Deadline 2 Comments                                                                                                                                                                                                                                                                                                                                                                                              | Applicants’ Response                                                                                                                                                                                                                                                                                                                                                              |
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|              |          | writing with the undertaker.                                                             |                                                                                                                                                                                                                                                                                                                                                                                                           | <p>reasonable amount of time for the MMO to determine any approvals sought, noting that the provisions of the DMLs (condition 8 on DML 1 and 2, condition 6 on DML 3 and 4 and condition 4 on DML 5) do allow for an alternative timeframe to be agreed between the MMO and the undertaker, which could be utilised in the unlikely event that six months was not sufficient in individual cases.</p> <p>3.11.4 The Applicants welcome the MMO's confirmation that it does not delay determining whether to grant or refuse such approvals unnecessarily. This supports the Applicants' position that six months should be a sufficient amount of time for such approvals to be considered, noting that an alternative timeframe can be agreed in the unlikely event that six months was not sufficient in individual cases.</p> <p>3.11.2, 3.11.5 and 3.11.6 The Applicants' position is that the submission of certain plans for approval at least four months prior to commencement of operation of licensed activities is appropriate and precedented (for example Hornsea Four and East Anglia One North OWFs). Notwithstanding that, the Applicants welcome that the MMO is open to discussion on this point and will therefore seek to agree the relevant timescales with the MMO and update the Examining Authority (ExA) once those discussions have taken place The Applicants will amend cross-references within this sub-paragraph and submit an updated version of the <b>Draft DCO</b> [APP-027] at Deadline 1.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                   |
| REP2-061:A82 |          | DML 1: Condition 17<br>DML 2: Condition 17<br>DML 3: Condition 15<br>DML 4: Condition 15 | <p>The MMO requests that the condition 16 (DML1) and condition 17 (DML1) are combined, and this update is also reflected within the other DMLs listed.</p> <p>The MMO also request that condition 17 (2) for DML 1 and 2 and 15 (2) for DML 3 and 4 is removed as this is not appropriate to be in a condition. The MMO set their own timescales. See comments 3.11.2-3.11.6 for determination dates.</p> | <p>The Applicants' preference is not to combine these two conditions, as changes to condition numbering would have an impact on crossreferences to DML conditions in a number of other application documents. In relation to sub-paragraph (2), please see response to RR-030=3.11 above.</p> <p>No change to the <b>Draft DCO</b> [APP-027] is proposed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>The MMO acknowledges the Applicant’s comments and refers to row 25 on determination dates in relation to a time scale for approval. However, in the current format there is duplication between Condition 15 (5) and (6) and Condition 17 and this should be resolved. Cross references are not enough justification to leave in a condition that does not meet the conditions tests – in this case it is</p> | <p>Please the Applicants’ response to REP2-061:A25 above in relation to determination dates in relation to a time scale for approval.</p> <p>The Applicants thank the MMO for highlighting the duplication between these provisions and have deleted conditions 15(4), (5) and (6) in DMLs 1 and 2 (and the equivalent provisions in DMLs 3, 4 and 5) in the <b>Draft DCO</b></p> |

| I.D.         | Main DCO                            |                                                                                                          | MMO Comments                                                                                    | Applicant Comments                             | Deadline 2 Comments                                                                                                                                                                                                                                                                                                                                                                                                                                           | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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|              |                                     |                                                                                                          |                                                                                                 |                                                | not relevant. The MMO would be open to Condition 15 (5) & (6).                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| REP2-061:A89 | Construction monitoring and surveys | DML 1: Condition 21 (4)<br>DML 2: Condition 21 (4)<br>DML 3: Condition 19 (4)<br>DML 4: Condition 19 (4) | The MMO will keep a watching brief on this condition as there are ongoing internal discussions. | The Applicants acknowledge the MMO's response. | The MMO requests that this condition along with Condition 21 (2) is updated to include the 2 of the worst-case scenario piles to be monitored. The MMO is currently reviewing the condition wording with SNCBs and will provide a standard condition in due course. However, the MMO is open to further discussions with the Applicant in the interim to agree wording or a position for the project as the MMO each project has specific programming issues. | The Applicants note the MMO's position but do not agree that it is necessary or appropriate to update the wording of the relevant conditions. This is for a number of reasons – the piling schedule is constrained by a number of other factors including the site layout and geology, array electrical design, commissioning sequence, pile design clustering, fabrication sequencing and vessel considerations. Additionally, what constitutes the de facto 'worst case' is not necessarily possible to determine ahead of time, given that for noise emissions this could be influenced by potentially unforeseen ground conditions and unanticipated interruptions in piling (for example hammer break down). |

## 2.4 Natural England

7. The below sections presents the Applicants' responses to Natural England's Deadline 2 Submissions
  - Cover letter and Annex 1 [REP2-068] (**Table 2-5**);
  - Appendix B2 - Natural England's comments and updated advice on Marine Physical Environment [REP2-064] (**Table 2-6**);
  - Appendix C2.1 - Natural England's comments and updated advice on Benthic and Intertidal Ecology [REP2-065] (**Table 2-7; Table 2-8; Table 2-9; Table 2-10**);
  - Appendix F2 - Natural England's comments and advice on Marine Mammals [REP2-067] (**Table 2-11**);
  - Risk and Issues Log - Rev 1 [REP2-069] (**Table 2-12**);
  - Appendix G2 - Natural England's Advice on Offshore Ornithology Deadline 2 [AS-159] (**Table 2-13**); and
  - Appendix H2 - Natural England's Advice on Offshore Ornithology Compensation Deadline 2 [AS-160] (**Table 2-14**).
8. The Applicants note that an updated Risk and Issues Log – Rev 2 [AS-161], including points regarding offshore ornithology, was issued by Natural England on the 28<sup>th</sup> February 2025. As the items covered in Appendix G2 - Natural England's Advice on Offshore Ornithology Deadline 2 [AS-159] and Appendix H2 - Natural England's Advice on Offshore Ornithology Compensation Deadline 2 [AS-160] match those included within the updated Risk and Issues Log – Rev 2 [AS-161], the Applicants determined that including the items in the Risk and Issues Log regarding offshore ornithology in section 2.4.5 would be an unnecessary duplication within this document.
9. Within **Table 2-12**, the Applicants have not included responses to items where Natural England have provided no material comments or have indicated that a response to / comments on a document will be provided later in the examination process
10. The Applicants have not included responses to Appendix C2.2 - Natural England's Advice on Cable Protection Assessment for Offshore Wind Farms and Inclusion in Marine Licences [REP2-066] or Risk and Issues Log – Rev. 2 [AS-161] as the document was not project specific, although its contents have been reviewed and considered in responses.

## 2.4.1 Cover Letter and Annex 1

Table 2-5 The Applicants' Response to Natural England's Cover Letter [REP2-068]

| I.D.       | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Applicants' Response                     |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| REP2-068:1 | <p><b>Natural England's Deadline 2 Submissions</b></p> <p>Natural England has reviewed the documents submitted by the Applicant at Deadline 1. An update of Natural England's position regarding documents relevant to our remit is provided in Annex 1, including anticipated timing of responses. Natural England is also submitting the following detailed responses, signposted from Annex 1:</p> <ul style="list-style-type: none"> <li>ENo10125 489455 DBS – Natural England's Risk and Issues Log Deadline 2</li> <li>ENo10125 489455 DBS Appendix B2 - Natural England's Advice on Marine Physical Environment Deadline 2</li> <li>ENo10125 489455 DBS – Appendix C2.1 – Natural England's Advice on Benthic and Intertidal Ecology Deadline 2</li> <li>ENo10125 489455 DBS – Appendix C2.2 – Natural England's advice on cable protection assessment for offshore windfarms and inclusion in marine licences Deadline 2</li> <li>ENo10125 489455 DBS – Appendix F2 – Natural England's Advice on Marine Mammals Deadline 2</li> </ul> | No response is required.                 |
| REP2-068:2 | <p><b>Draft Development Consent Order (DCO)</b></p> <p>Due to staff absence, Natural England will be providing detailed comments on all currently submitted versions of the Draft DCO and associated documents as soon as possible following Deadline 2; we currently anticipate this to be within two weeks of the deadline.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | The Applicants acknowledge this comment. |
| REP2-068:3 | <p><b>Offshore Ornithology</b></p> <p>As raised in Natural England's Deadline 1 cover letter [REP1-063], we will endeavour to provide a full ornithology update as soon as possible following Deadline 2; we currently anticipate this to be within two weeks of the deadline.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | The Applicants acknowledge this comment. |
| REP2-068:4 | <p><b>Fish and Shellfish</b></p> <p>Due to staff absence, Natural England will be deferring comments on Fish and Shellfish until Deadline 3.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | The Applicants acknowledge this comment. |
| REP2-068:5 | <p><b>Strategic Compensation Measures for offshore wind activities</b></p> <p>Natural England draws the attention of the ExA and the Applicant to the Ministerial Statement issued on 29th January 2025 which confirmed DEFRA's support for delivery of strategic benthic compensation, making wider compensation measures available and delivery of compensation through the Marine Recovery Fund.</p> <p><a href="#">Written statements - Written questions, answers and statements - UK Parliament</a></p> <p>DESNZ also issued interim guidance on the Marine Recovery Fund. The guidance will provide developers a means to access MPA designation as a compensation measure, prior to the launch of the MRF. The interim guidance also provides advice to developers in planning who</p>                                                                                                                                                                                                                                                 | No response is required.                 |

| I.D. | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Applicants' Response |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
|      | <p>are developing their own avian compensation packages on how to ensure that their consent documents include the option to switch to sourcing their avian compensation through the Marine Recovery Fund when it is in place.</p> <p><a href="#">Strategic compensation measures for offshore wind activities: Marine Recovery Fund interim guidance - GOV.UK</a></p> <p>Additionally Natural England's response to ExA question ME. 1.10 for Five Estuaries provides some additional information <a href="#">ENo10115-000899-Natural England - Responses to ExQ1.pdf</a> relating to compensatory measures.</p> |                      |

## 2.4.2 Marine Physical Environment

Table 2-6 The Applicants' Response to Natural England's Advice on Marine Physical Environment [REP2-064]

| I.D.       | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REP2-064:0 | <p>In formulating these comments, the following document submitted by the Applicant have been considered in relation to the impacts of Dogger Bank South (East and West) Offshore Wind Farm (DBS) on Marine Physical Environment:</p> <ul style="list-style-type: none"> <li>[AS-048] 10.30 Response to Natural England's Relevant Representations (Revision 01)</li> <li>[AS-110] 7.18 ES Chapter 18 – Terrestrial Ecology and Ornithology (Revision 3) (Tracked)</li> <li>[AS-156] The Applicants' Responses to January 2025 Hearing Action Points (Revision 2) (Tracked)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                           | No response is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| REP2-064:1 | <p><b>Emergency intertidal access</b></p> <p><u>Natural England's Risk and Issues Log Deadline 2, Point B14</u></p> <p>The Applicant has updated [AS-110] (Chapter 18 - Terrestrial Ecology and Ornithology (Revision 3)) with an assessment of the potential impact of temporary loss/fragmentation of habitat to the priority habitat of maritime cliff and slope from the emergency intertidal access, with mitigation measures such as preconstruction surveys, use of protective matting, and monitoring included. We welcome this, however we note in paragraph 252 it is stated that the temporary emergency access design will be finalised when the contractor is appointed. Natural England advise that clarity is needed on the aspects that are not currently finalised to determine if this can be resolved. We consider that a full outline contingency plan should be included at the point of consent (N.B. this does not have to be a standalone document).</p> | <p>The <b>Outline Code of Construction Practice (CoCP) (Revision 3)</b> [REP1-025] submitted at Deadline 1 was updated to include a commitment for the Drilling Fluid Management Plan (which will describe the procedure and measures for dealing with drilling fluid from trenchless crossings) to include details and the design of the emergency intertidal access design. This Drilling Fluid Break Out Management Plan will be developed post-consent as part of the detailed CoCP(s) approved under Development Consent Order (DCO) Requirement 19, upon appointment of a Principal Contractor(s). This would be subject to approval by East Riding of Yorkshire Council in consultation with the Environment Agency, Marine Management Organisation (MMO) and Natural England, as required. As such paragraph 252 as referenced in Natural England's comment (amended to paragraph 254 in Revision 5 of <b>Chapter 18 Terrestrial Ecology</b> [REP2-019] submitted for Deadline 2), is unchanged. The Drilling Fluid Breakout Management Plan will include details and a design (for approval) of the Emergency Intertidal Access, which may require a temporary access ramp and / or ground protection matting shoreward of Mean High Water Springs to access over the cliff face. <b>Chapter 5 Project Description (Revision 3)</b> [REP1-009] was also updated for Deadline 1 to include additional details on the potential design of the emergency access. As stated in paragraph 253 of <b>Chapter 5 Project Description (Revision 3)</b> [REP1-009], as the cliff face is highly dynamic and constantly changing, the temporary access over the cliff would be designed when the Contractor is appointed to avoid abortive work at this stage.</p> <p>The Applicants do not therefore intend to finalise the design of the emergency intertidal access in advance of receiving consent and / or appointing a Principal Contractor. Should Natural England request further details of the design options these could be provided to Natural England at a later deadline but would be subject to change depending on the nature of the maritime cliff and slope habitat at the time of detailed design.</p> |
| REP2-064:2 | <p><b>Nearshore cable protection</b></p> <p><u>Natural England's Risk and Issues Log Deadline 2, Point B23</u></p> <p>Natural England have previously advised [RR-039] that we cannot rule out an adverse effect on integrity for the Humber Estuary SAC due to the current condition allowing 10% of the cumulative export cable length to be protected from 350m seaward of MLWS to the 10m depth contour.</p> <p>Whilst we welcome the Applicant's commitment to the separate bundling of pairs of the export cables outlined in the updated Cable Statement [AS-079], we note that it has not been secured in the DCO and updated cable protection estimates and assessments have not been provided.</p>                                                                                                                                                                                                                                                                     | <p>Regarding cable bundling, the Applicants direct Natural England to the response (REP1-067:B49) in <b>The Applicants' Responses to Deadline 1 Documents</b> [REP2-058] which states:</p> <p><i>'...The commitment to cable bundling has been made in the <b>Cable Statement (Revision 2)</b> [AS-078]. Each Deemed Marine Licence (Schedules 10-14) presented in the <b>Draft DCO (Revision 5)</b> [REP1-004] contains a condition (such as condition 15 (1) (g) in Schedule 10) which states that construction activities may not commence until a final cable statement (in accordance with the cable statement) has been submitted to and approved in writing by MMO, in consultation with Trinity House, the MCA, the relevant statutory nature conservation body and UKHO as appropriate. Through this mechanism this commitment is secured by the Draft DCO as it stands and no updates to the Application are necessary.'</i></p> <p>The Applicants note that the height of cable protection is secured in the Deemed Marine Licences (DMLs) and direct Natural England to the response as stated in the <b>Response to Natural England's Relevant Representation</b> [AS-048]</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| I.D.       | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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|            | <p>We also note the Applicant's response [AS-048] which states that for navigational safety, cable protection within the 10m depth contour would be limited to a height of no greater than 50cm and as such rock placement would not be used in this area with alternative solutions to be considered such as mattresses. However, this is also not a commitment that has been secured and no evidence has been provided to demonstrate that 50cm will not disrupt longshore sediment transport towards the Humber Estuary SAC and Spurn Point. We therefore advise that further evidence is provided, or that the original commitments advised in our Relevant Representation are secured.</p> | <p>(RR-039:B35) ...'Regarding the potential height of cable protection measures within the 10m depth contour, as noted in paragraph 189 of <b>Chapter 14 Shipping and Navigation</b> [APP-121] the Applicants would follow the guidance contained in MGN 654 in relation to cable protection, namely that cable protection would not change the charted water depth by more than 5%, unless otherwise agreed with the Maritime and Coastguard Agency and Trinity House. This commitment is secured within the following conditions of the DMLs:</p> <ul style="list-style-type: none"> <li>• DML 1 &amp; 2 – Condition 15;</li> <li>• DML 3 &amp; 4 – Condition 13; and</li> <li>• DML 5 – Condition 11.</li> </ul> <p>As such, within the 10m depth contour the Applicants would be limited to a cable protection height of no greater than 50cm. Therefore, rock placement would not be used within the 10m depth contour, with other design solutions (such as concrete mattresses) being required should a need for cable protection measures be identified in the final design of the Projects.'</p> <p>The Applicants have assessed changes to bedload sediment transport due to cable protection measures as having a negligible significance of effect (see Section 8.7.4.5. of <b>Chapter 8 Marine Physical Environment</b> [APP-084]). The evidence base to support this assessment is presented in paragraph 298 which is restated below:</p> <p>'In a study at Easington along south Holderness, HR Wallingford (2011) showed that most of the longshore transport from wave breaking occurs close to the shoreline, within approximately 250m of the cliff line. Seaward of this, the wave-driven sediment transport is effectively zero. Given the similar shore profile gradients at the landfall and Easington (East Riding of Yorkshire Council, 2014) the conclusion can be drawn that the active zone at the landfall is similar in width to that at Easington. Hence, sediment transport driven by waves seaward of 250m from the cliffs at the landfall is very low (although still within the closure depth) and there will be no effect on these processes by the presence of the cable protection structures.'</p> <p>The Applicants have committed to limiting the length of cable protection measures in the nearshore to 10% of the distance from 350m of Mean Low Water Springs (MLWS) to the 10m water depth contour. The maximum distance between these two points within the Offshore Export Cable Corridor is 1164m. Therefore, the approximate length of cable protection measures would be 116m per cable trench (assuming the cables were laid in a straight line). At these lengths they would not create a complete blockage effect to longshore sediment transport. This indicative length of cable protection is shown Figure C-1 in <b>Appendix C</b> of this document. They will also only protrude 50cm above the seabed, so would not create a complete blockage effect in the water column and sediment would bypass the structures both over and around them. Therefore, there would be no effect in terms of sediment supply to the Humber Estuary Special Area of Conservation (SAC) and Spurn Point which are located 40km away from the landfall, especially considering the extremely high volumes of sediment delivered to the Holderness coast through cliff erosion, given it is the fastest eroding coast in the UK.</p> <p>To further demonstrate the limited effects that cable protection in the nearshore environment would have, the Applicants are undertaking modelling of an indicative case of this feature and the effect it would have on the wave regime in the area – given that wave generated currents are the principal driver of sediment movement in the vicinity of the Projects' landfall location. A technical note detailing this modelling will be provided at Deadline 5.</p> |
| REP2-064:3 | <p><b>Changes to bedload sediment transport and seabed morphology</b></p> <p><u>Natural England's Risk and Issues Log Deadline 2, Point B29</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>The Applicants would like to reiterate that the final version of the CBRA will not be completed within the time frame of examination. There will also be no updates to the existing CBRA within the time frame of examination. This is because there is no new information or data available to the Applicants that can provide any further understanding than has already been documented. The Applicants are in the process of planning additional surveys for summer</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| I.D. | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <p>Natural England previously advised [RR-039] that there is insufficient information to support the assessment of changes to bedload sediment transport and seabed morphology due to the presence of cable protection measures on Dogger Bank. We advised seabed mobility assessment should be carried out to inform the cable burial assessment and, thus, the requirement for cable protection measures.</p> <p>The Applicant has clarified in [AS-156] 'The Applicants' Responses to January 2025 Hearing Action Points (Revision 2) (Tracked)' that the Cable Burial Risk Assessment (CBRA) and cable routing studies will include seabed mobility assessment, but that final versions of these documents are unlikely to be submitted during the Examination process. Natural England do not expect final versions of these documents to be submitted within Examination timeframes, but we advise that endeavours are made to provide updated outline versions including a more detailed assessment on bedform migration rates and directions, thickness of the mobile sediment layer and distribution, scour potential, and a refinement of the sediment transport model (including consideration of predicted wave height changes and increased storminess).</p> | <p>2025. When the results become available, they will feed into the CBRAs as they are further updated post consent. The final CBRAs will be appended to any final Cable Statements submitted by the Applicants in fulfilment of the relevant DML Conditions relating to this matter, such as condition (such as condition 15 (1) (g) in Schedule 10). Hence, Natural England will have sight of, and opportunity to comment on, these documents and any related engineering proposals as part of the DML condition discharge process.</p> <p>The current understanding of seabed mobility is outlined in section 8.5.8. of <b>Chapter 9 Marine Physical Environment</b> [APP-080]. This baseline understanding is based on a Projects-specific seabed mobility study undertaken by the Applicants to inform the assessment (MarineSpace, 2023). The study assesses multiple bathymetric surveys to quantify bed level change and shows that levels of change are of the order of 0.2m over an 11 year period in the Array Area. This study has been provided for consideration during the examination period, see the <b>Bed Mobility &amp; Thermal Environment</b> [document reference: 13.7] submitted at Deadline 3. As noted above, it is expected this document will be superseded as further site investigation and design work is completed prior to construction. The Applicants re-iterate that, as noted above, there are protections written into the Draft DCO that will ensure that Natural England have the opportunity to review the information requested once it is available as part of the process of discharging DML conditions.</p> |

## 2.4.3 Benthic and Intertidal Ecology

Table 2-7 The Applicants' Response to Natural England's Advice on Benthic and Intertidal Ecology [REP2-o65]

| I.D.         | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REP2-o65:0   | <p>Overview</p> <p>In formulating these comments, the following documents submitted by the Applicant have been considered in relation to the impacts of Dogger Bank South (East and West) Offshore Wind Farm (DBS OWF) on Benthic and Intertidal Ecology:</p> <ul style="list-style-type: none"> <li>[AS-025] 10.36 Review of evidence on recovery of sandbank habitat following habitat damage (Revision 01)</li> <li>[AS-028] 8.24 Outline Offshore Operations and Maintenance Plan (Revision 02) (tracked)</li> <li>[AS-048] 10.30 Response to Natural England's Relevant Representations (Revision 01)</li> <li>[AS-081] 8.27 Outline Scour Protection Plan (Revision 2) (tracked)</li> <li>[AS-104] 10.38 Benthic Ecology Technical Note</li> <li>[AS-156] 11.6 The Applicant's Responses to January 2025 Hearing Action Points (Revision 2) (Tracked)</li> </ul> <p>A summary of Natural England's key concerns in relation to Benthic and Intertidal Ecology is set out below in sections 1 – 8. Our detailed comments on documents submitted by the Applicant as listed above are provided in Tables 1-3.</p> | No response is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| REP2-o65:1.1 | <p><b>Ecological halo effects</b></p> <p><u>Natural England's Risk &amp; Issues Log Deadline 2, point C8</u></p> <p>1.1 Natural England acknowledges that during pre-application discussions with the Applicant we had not used the specific terminology of an 'ecological halo effect', with this terminology introduced in our Relevant Representation submission. However, we highlight that whilst the terminology had not been used, the impact pathway it describes is not new or unknown. Colonisation of hard structures and/or utilisation of the presence of infrastructure in the water column, can lead to localised changes in biological communities, which combined with changes to physical processes resulting from the presence of the infrastructure, can alter the characteristic composition of the benthic habitat and/or biological community in the surrounding area, creating a halo of changed habitat and ecology.</p>                                                                                                                                                                     | The Applicants are grateful for the further exposition of Natural England's understanding of this potential impact and their concerns for gaps within our assessments. The Applicants have responded to detailed points below and consider that the impact assessment does indeed account for the potential impacts of concern.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| REP2-o65:1.2 | <p>1.2 We note the Applicant's assertion that this has not previously been raised during the Evidence Plan Process or with respect to other offshore wind farms (OWF). However, the Applicant's EIA scoping screened in 'Colonisation of introduced substrate', which Natural England assumed would relate to an assessment of the impacts of colonisation on the surrounding habitat. We also consider that it falls under the screened in impact pathways of 'Physical change to another habitat type' and 'Introduction of Invasive and Non-Native Species' (which can include both species non-native to a protected habitat and those non-native to UK waters). We also highlight that DBS is the only Round 4 project to have array areas wholly within a Special Area of Conservation (SAC) designated for benthic habitat. Further, monitoring the effect of colonisation of OWF infrastructure on the characteristic</p>                                                                                                                                                                                     | <p>Colonisation-related impacts are covered within <b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-o85] in section 9.6.3.5 Impact 7 - Colonisation of Introduced Substrate, Including Invasive / Non native Species. The worst case is covered in Table 9-1 and this cross-references Impact 5 – Permanent habitat loss (which equates to 'physical change to another habitat type' in Natural England's response) and this provides the footprint which includes the worst case for scour protection for wind turbines, platforms and unburied cables.</p> <p>This is mirrored in the assessment presented in the <b>Report to Inform Appropriate Assessment (RIAA) Habitats Regulations Assessment (HRA) Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)</b> [AS-051] under 6.4.2.6.1 Physical change (to another seabed / sediment type) with the worst case presented in Table 6-3.</p> |

| I.D. | Natural England Response                                                                                                        | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|      | community of the Dogger Bank SAC is a key component of the Benthic Monitoring Plans for the Dogger Bank A, B, C and Sofia OWFs. | <p>The potential impact relates to two pathways for impact – firstly, loss of habitat through physical displacement (i.e. covering the existing sandbank) and secondly loss of habitat by organic enrichment of surrounding sediments changing the sediments in such a gross manner that they no longer qualify as Annex 1 sandbank.</p> <p><b>Loss of habitat through physical change</b></p> <p>This is considered in the worst case assumptions. Table 9-1 (<b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085]) and Table 6-3 (<b>RIAA HRA Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)</b> [AS-051]) assess habitat lost as the worst case of turbine + scour protection and worst case of unburied protected cable. Updates to these figures are provided in <b>Project Change Request 1 – Offshore and Intertidal Works</b> [AS-141] and comprise 1.9km<sup>2</sup> of the Dogger Bank SAC.</p> <p>For wind turbines we have assumed an 11m monopile with 63m diameter scour protection (i.e. this extends outwards up to 26m from the base of the turbine). This equates to a footprint of 3,117m<sup>2</sup> per turbine.</p> <p>For cable crossings within the Dogger Bank, maximum parameters for cable protection are for 15.2m and 6m width (for export and inter-array cables respectively) for a length of 400m at any one location. Any hard substrate associated with cable protection would therefore be confined to small patches.</p> <p>Within the assessment there is already an assumption of 100% physical change (i.e. permanent habitat loss) within these footprints. If this scour and cable protection is subsequently colonised there is no further loss of habitat – this footprint was already lost. If scour protection or cable protection is not required (either in fewer locations, a lower percentage of cables or less scour protection is required at turbines) then the footprint for physical change will be below the worst case.</p> <p><b>Loss of habitat by organic enrichment of surrounding sediments</b></p> <p>There is potential for fouling communities to develop on turbine towers, scour protection and cable protection. Organic material will be lost through mortality or effects of currents / storm action meaning that organic matter may be dispersed from the turbine towers, scour protection and cable protection. There may also be inputs from faeces of sessile species such as mussels.</p> <p>In the case of turbine towers, material being shed will act as per sediment particles assessed elsewhere in the assessment (e.g. Impact 2 – Increased Suspended Sediment Concentrations) thus it is expected that the heavier material (e.g. aggregations of mussels) will settle rapidly to the seabed, in close proximity of the turbine tower. At Thanet, heavier material was deposited within 10 – 15m of the foundation (Vattenfall Wind Power Ltd, 2018<sup>11</sup>). It is likely that for the Projects heavier material would therefore be deposited on the scour protection (or within the area assessed for habitat loss if no scour protection is deployed). This is supported by evidence from Block Island Wind Farm (Hutchison <i>et al</i>, 2020<sup>12</sup>) where operational monitoring shows greatest benthic changes have occurred on or within the footprints of the foundations (four years post installation). This footprint is already accounted for within the footprint for physical change (Table 9-1 of <b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085]) and Table 6-3 (<b>RIAA HRA Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)</b> [AS-051]).</p> |

<sup>11</sup> Vattenfall Wind Power Ltd. (2018) Thanet O&M Marine Licence: Supporting Environmental Information.

<sup>12</sup> HDR (2020). Benthic and Epifaunal Monitoring During Wind Turbine Installation and Operation at the Block Island Wind Farm, Rhode Island – Project Report. Final Report to the U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewable Energy Programs. OCS Study BOEM 2020-044. Volume 1: 263 pp; Volume 2:380 pp.

| I.D. | Natural England Response | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|      |                          | <p>Smaller detritus may stay in suspension within the water column for a longer period of time and become advected by tidal currents. Therefore, not all material that is shed from the turbines towers would be deposited in the immediate vicinity.</p> <p>It is likely that there will be some input of organic material from the turbines, cable and scour protection to the sediments surrounding them. This could potentially lead to changes in the ecology of those sediments.</p> <p>As noted in our response (<b>Response to Natural England's Relevant Representations</b> [As-048]) to Natural England's original comments in RR-039, the evidence is equivocal at best for whether any significant effect is detectable, and effects seem highly variable and dependent on the type of structure and location, seabed-type and hydrographic conditions. The following cases come from a review of available literature from comparable locations.</p> <p>Lefaible <i>et al</i> (2019)<sup>13</sup> report different results between jacket and monopile foundations at operational windfarms in Belgium. The Thornton Bank and Bligh Bank locations are environments that are subject to strong physical disturbance where the seafloor typically consists of well-sorted, medium-coarse and mobile sediments with relatively “poor” communities (Lefaible <i>et al</i>, 2019<sup>13</sup>), and so are comparable to the Dogger Bank. In two consecutive years of monitoring (Lefaible <i>et al</i>, 2019<sup>13</sup>), higher fine sand fractions were observed &lt;50m around the jacket foundations and organic enrichment was also observed around the jackets in Year 1, but not in Year 2. In contrast, an opposite trend of lower average organic matter content was observed at very close distances around the monopiles. Higher densities and diversity of the benthos in close vicinity of the turbines was reported, which was most pronounced around the jackets, with differences at the monopiles not statistically significant.</p> <p>Evidence from Block Island Wind Farm (HDR, 2020<sup>12</sup>) (which included a comprehensive series of diver, grab and video sampling) generally showed no strong gradients of change in sediment grain size, enrichment, or benthic macrofauna in monitoring conducted 4 years after construction in most study locations. The seabed was described as a coarse sediment environment with medium to very coarse sands dominating, with some fines, so is comparable to the Dogger Bank. Notably, the largest changes in communities beyond the footprint of the turbine were seen in the lowest energy study location, which also showed least post-construction recovery.</p> <p>Moray East has a range of sandy and coarse sediment biotopes (Moray Offshore Wind Farm (East) Limited, 2024<sup>14</sup>). In post construction monitoring at Moray East (undertaken 2 – 3 years post installation) (Moray Offshore Wind Farm (East) Limited, 2024<sup>14</sup>) no gross changes in benthic habitat types were observed between pre- and post-construction occasions. Significant broadscale habitat alteration was not detected, no evidence of seabed organic enrichment was recorded and no accumulation of biomass from fouling communities was observed (Moray Offshore Wind Farm (East) Limited, 2024<sup>14</sup>). It is noted that survey techniques were acoustic or visual and no grab sampling was undertaken.</p> <p>Whilst there is evidence of ‘change’ in some of the literature, from the comparable situations to Dogger Bank (e.g. Lefaible <i>et al</i>, 2019<sup>13</sup>) the most gross change was from a community typical of well-sorted, medium-coarse and mobile sediment to one with fine to medium sandy sediment. If this example were repeated at Dogger Bank, this would represent <i>a change from one Annex 1 sandbank biotope to another Annex 1 sandbank biotope. It would not represent a loss of Annex 1 habitat.</i> Figure 9-4 of <b>Chapter 9 Benthic and Intertidal Ecology - Figure 9-1 to Figure 9-6</b> [APP-086] shows how the different habitats identified within site specific survey for the Projects are found across the Array Areas with coarse sediment identified next to fines.</p> |

<sup>13</sup> Lefaible, N.; Colson, L.; Braeckman, U.; Moens, T. (2019). Evaluation of turbine-related impacts on macrobenthic communities within two offshore wind farms during the operational phase, in: Degraer, S. et al. Environmental impacts of offshore wind farms in the Belgian part of the North Sea: making a decade of monitoring, research and innovation. Memoirs on the Marine Environment, : pp. 47-63

<sup>14</sup> Moray Offshore Windfarm (East) Limited (2024) Post Construction Benthic Monitoring Report Moray East Offshore Wind Farm, November 2024

| I.D.         | Natural England Response                                                                                                                                                                                                                                                                    | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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|              |                                                                                                                                                                                                                                                                                             | <p>In addition, it is important to remember that sediment biotopes are a useful <b>statistical construct</b> whereby the similarity between the content of individual small sediment grab samples (approx. 0.1m<sup>2</sup>) often collected at relatively wide spacing (up to 10's of kilometres) is calculated in terms of the number and abundance of infaunal species present and sediment grain size. The degree of similarity between such samples is a judgement and varies with scale. Often samples collected at the same location and time will display significant variation in number and abundance of species. When the distribution and extent of biotopes are mapped, it is necessary to interpolate between individual sample points using additional environmental information such as water depth, broad sediment type and various statistical techniques. When broader scale Annex I habitat types are mapped, such areas can incorporate considerable variation in biological communities present in time and space depending on many factors such as localised variations in sediment type, slope, organic matter content, availability of small scale hard substrates (e.g. pebbles, shells) for attachment and disturbance, larval settlement and recruitment. Such localised variation in small scale community types is characteristic of heterogeneous habitats in naturally disturbed environmental conditions, rather than a physical change to another habitat type at Annex I habitat level. Any change that is potentially occurring as a result of the wind farm therefore needs to be considered in light of the fundamental variability between communities even if assigned to the same biotope.</p> <p>Finally, it should be noted that construction and operation of the Projects will be taking place in a situation where the cessation of fishing via bottom-towed fishing gear has been in place for many years. There is no clear understanding of how the cessation of fishing will affect the communities of the Dogger Bank and what 'recovery' will mean for community composition, the trajectory or speed of any change. As stated in the <b>RIAA HRA Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)</b> [AS-051], fisheries impacts were considered to have affected over 70% of the SAC area. A reduction in disturbance (in both scale, intensity and frequency) across the area is likely to lead to significant changes in ecology of the Dogger Bank SAC over time from the current baseline conditions, although it is likely in the medium term that these would not mean a change from Annex 1 sandbank (although historically (i.e. prior to industrial fishing) areas of the Dogger Bank included oyster reefs (which would qualify as Annex 1 reef (ABPMer, 2021<sup>15</sup>)).</p> <p><b>Summary</b></p> <p>The Applicants have assumed 100% habitat loss (totalling up to 1.9km<sup>2</sup> for the Projects) due to placement of monopile foundations, cable and scour protection, sediment habitat will be lost up to this extent (by a change to hard substrate) if the worst case is realised. Alternatively, the assessment has already accounted for habitat loss up to this total if less scour protection is required, jackets are deployed etc.</p> <p>In terms of the changes to sediments beyond the footprint of infrastructure, the Applicants consider that it is unlikely that such gross changes would occur that these would lead to a loss or change of Annex 1 feature. Such changes should be a focus of the benthic monitoring programme, but do not warrant the increase of the footprint of habitat loss in the assessment.</p> <p>The Applicants consider that the current assessment is robust, and will add the above narrative to the updated version of <b>RIAA HRA Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)</b> [AS-051] to be submitted at Deadline 4.</p> |
| REP2-065:1.3 | 1.3 We also note the Applicant's highlighting of the uncertainties of the scale or likelihood of this impact. Natural England agrees that there is uncertainty, but due to the Project's location within the Dogger Bank SAC (of which the characteristic community is a protected feature) | The Applicants note mention of 'interlinking cables between the arrays' and clarify that the majority of array cables will be buried, therefore will not be relevant to halo effects which result from above surface infrastructure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

<sup>15</sup> ABPMer (2021) Restoring the UK's native oyster <https://www.abpmer.co.uk/blog/restoring-the-uk-s-native-oyster/>

| I.D.         | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|              | and the potential for impacts to be exacerbated as a result of the network of interlinking cables between the arrays, we consider this uncertainty is why it should be robustly assessed and monitored. We therefore maintain our advice that a robust assessment is needed of the potential worst-case area of impact on benthic communities within Dogger Bank SAC sandbank feature, including more detailed assessment of the likely nature and scale of that impact, as a result of changes to physical and biological processes following the placement of structures and cable/scour protection on the seabed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>The Applicants consider that the current assessment is robust as it covers the worst case of predicted habitat loss, specifically the area around the turbines, cable and scour protection which would either be lost directly or potentially affected by colonising epifauna.</p> <p>In terms of the changes to sediments beyond the footprint of infrastructure, the Applicants consider that it is unlikely that such gross changes would occur that these would lead to a loss or change of Annex 1 feature. Such changes should be a focus of the benthic monitoring programme but do not warrant the increase of the footprint of habitat loss in the assessment.</p> <p>In addition, Table 1-3 of the <b>In Principle Monitoring Plan (IPMP) (Revision 2)</b> [REP2-043] it is stated that '<i>Grab sampling will be designed to capture localised, near-field, far-field and reference sites</i>' during pre- and post-construction surveys which would identify any changes in benthic communities.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| REP2-065:1.4 | 1.4 Once assessments have been updated, monitoring should be secured via the In-Principal Monitoring Plan to determine whether the residual impacts are as predicted. We refer the Applicant to the MMO's (20141) Review of environmental data associated with post-consent monitoring of licence conditions of offshore wind farms, which discusses both evidence and monitoring approaches for this impact.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>Benthic monitoring is already included within the <b>IPMP (Revision 2)</b> [REP2-043]. The exact survey specification has yet to be determined but the Applicants' methodology would be informed by current monitoring underway and proposed for Dogger Bank A, B, C and Sofia and feedback from Natural England and the Marine Management Organisation (MMO) to determine any lessons learned and ensure that the monitoring is fit for purpose.</p> <p>Specific reference to colonisation of foundations / scour protection can be added for operational monitoring if required and the IPMP updated.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| REP2-065:2.1 | <p><b>Receptor value</b></p> <p><u>Natural England's Risk &amp; Issues Log Deadline 2, point C9</u></p> <p>2.1 Natural England maintains the advice provided in our Relevant Representation [RR-039] that an appropriate value should be attributed to biotopes/habitats which contribute to Annex I features, and subsequently more appropriately used to inform the magnitude of impacts. We note the Applicant's methods state in section 9.4.2.1.2 of ES Chapter 9 Benthic and Intertidal Ecology [APP 085] that "<i>The value will be considered, where relevant, as a modifier for the sensitivity assigned to the receptor, based on expert judgement</i>", Table 9-9 outlines the definition of 'High' value as "<i>Habitats (and species) protected under international law (e.g. Annex I habitats within an SAC boundary)</i>" and Table 9-10 defines 'High' magnitude as "<i>Fundamental, permanent / irreversible changes, over the majority of the receptor, and / or considerable alteration to medium or high value receptors</i>". We therefore consider that by the Applicant's own methods, habitats contributing to Annex 1 features should be assigned a 'high' value.</p> | <p>The Applicants reiterate their response to RR-039:C7 in <b>Response to Natural England's Relevant Representation</b> [PDA-013] that [emphasis added]:</p> <p><i>'In the EIA (<b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085]) it is explained in section 9.4.3.1.1 that sensitivity is primarily based upon the ecological sensitivity of the receptor to an effect and this is based on the MarESA biotope sensitivities. Whilst value (in this case being part of a designated feature) <b>may be used as a modifier</b> to increase sensitivity <b>this is not automatically done and is subject to expert judgement</b>. Given the ubiquity of the biotopes within the Dogger Bank across the Southern North Sea, it was not considered that the value element was required to modify the sensitivity. Whether these biotopes are within or outwith a designated site is not relevant in this case. Note that in the case of the piddock feature, higher sensitivity was assigned not only due to ecological sensitivity but also as this is much rarer.</i></p> <p><i>The value is considered therefore within the HRA (<b>RIAA HRA Part 2 of 4</b> [APP-046]). The status of the biotopes as part of a designated site is the primary consideration and the key driver in the difference in the conclusions on adverse effect on integrity within the Appropriate Assessment from significance in the EIA.</i></p> <p><i>The Annex I habitat features of the Flamborough Head SAC were assessed in section 6.5.2 of the <b>RIAA HRA Part 2 of 4</b> [APP-046]. A separate technical note regarding the indirect effects of sediment deposition on the specific biotopes of the Flamborough Head SAC in relation to the Environmental Statement (ES) has been included alongside this response.'</i></p> <p>Note that if the Applicants assigned all habitats within SACs as high value and high sensitivity, the significance of effect for the assessment of all impacts would be minor adverse, which is not significant in EIA terms. This is due to the negligible magnitude of impacts which in summary would be localised and short-term.</p> |
| REP2-065:3.1 | <p><b>Sediment deposition and disposal</b></p> <p><u>Natural England's Risk &amp; Issues Log Deadline 2, point B17, B44, B45, C21, C33, C34</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>The Applicants note that no likely significant effects are anticipated in connection with this activity as assessed for the worst case presented in the ES. Hence, no mitigation need necessarily be provided. However, after further consideration of the practicalities of this request for these Projects the Applicants consider that, within the boundary of the Dogger Bank SAC, they can commit to depositing like sediment on like sediment. Specifically, material</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| I.D.         | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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|              | 3.1 Natural England advised in our Relevant Representation [RR-039] that within benthic MPAs, any sediment deposition from sandwave levelling/seabed clearance should be located within areas of similar sediment type, as close to and upstream of the original sandwave, and be deposited using a fall pipe (should a suction hopper dredger be used).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | identified as sand within surficial sediments can be dredged and deposited on areas of surficial sand. Similarly, surficial sediments identified as being gravel or silt will be disposed of on areas presenting surficial gravels and silts respectively. The <b>Cable Statement (Revision 3)</b> [REP2-039] will be updated to reflect this commitment, with submission at Deadline 4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| REP2-065:3.2 | 3.2 The Applicant states [AS-048] that due to the variety of the sediments present, it would be difficult to dispose of material in areas of the same type. Therefore, Natural England continues to query the necessity for sandwave levelling for this project as this has not been required for Dogger Bank A, B, C and Sofia (previously Dogger Bank Crekye Beck A&B and Dogger Bank Teesside A&B). If after further consideration the Applicant determines it is required, we request they provide further justification/reasoning on why sand from sandwave levelling cannot be deposited in areas of sand in the near vicinity to the levelling activity. It is unclear if it is because of the tool that the Applicant is proposing to undertake sandwave levelling with, and how sediment would be deposited as a result. We further query this because the site characterisation surveys show similar habitats throughout the site. In addition, sandwaves by their very nature form the mobile parts of sandbanks so tend to be finer sediment types which are found throughout the SAC. Natural England highlights that developers on other projects (not within Dogger Bank SAC) have chosen to remove the mobile layer of the sandbanks, i.e. the sand waves, to ensure that cables can be laid in the stable part of the sandbank. This reduces the likelihood of cable exposure and the need for external cable protection and ensures that sediment is retained within the designated site, thus making sandwave levelling a mitigation measure to avoid permanent habitat change/loss. If this is not a sandwave levelling tool issue, Natural England queries if the Applicant is proposing a structural change to the actual sandbank, rather than sandwave levelling. If this is the case then we advise that this has different environmental implications including (but not exclusively) longer recovery times, which would need to be assessed. | <p>The Applicants' engineering assessment is that seabed preparation may be required in the Array Area. The preliminary CBRA refers to "<i>literature for the site which suggests that the large-scale bedforms are largely stable, whilst the medium-scale bedforms are mobile, with a bed level change of up to 0.9m in some locations</i>". Until such time as further survey and design work has been undertaken the need for this activity cannot be ruled out, as per recommendations by the Applicants' CBRA consultant.</p> <p>The Applicants note that each of the Dogger Bank A, B, C and Sofia projects made allowances for sand wave clearance within their Environmental Statements and consents applications. The Applicants highlight the equivalence of the DBS Projects with each of these projects at the consenting stage. Further, the Applicants observed that the DBS Projects are different projects located in different areas of the Dogger Bank to Dogger Bank A, B, C and Sofia and thus they might reasonably be expected to have different seabed conditions and engineering requirements which may have resulted in their ability to progress without sand wave clearance. The Applicants note that the ability of each of the projects referenced to progress without the need for sand wave clearance was an emergent fact realised in the post-consent stage of each project</p> <p>The Applicants note that any seabed preparation work will be minimised as far as is practicable for project delivery.</p> <p>After further consideration of the practicalities of this request for this project, the Applicants consider that, within the boundary of the Dogger Bank SAC, they can commit to depositing like sediment on like sediment, that is to say material identified as sand within surficial sediments can be dredged and deposited on sand, with surficial sediments identified as being gravel or silt similarly disposed of on gravel and silt respectively. The <b>Cable Statement (Revision 3)</b> [REP2-039] will be updated to reflect this commitment, with submission at Deadline 4.</p> <p>The Projects can confirm that, as noted in <b>Cable Statement (Revision 3)</b> [REP2-039], the intention for seabed preparation for cable installation is to dredge sediments to the seabed reference level, that is to say, to the depth of the non-mobile seafloor.</p> |
| REP2-065:3.3 | 3.3 Natural England advises, if the Applicant is unable to apply the mitigation required, then (Option 1) they will need to provide a WCS and associated assessment of "physical change to another sediment type" within the ES and RIAA. Alternatively, (Option 2) the Applicant should consider committing to mitigating the 'physical change' impacts by using a control flow excavator (or similar tool) for sand wave levelling, which would side cast the sediment, thus avoiding the need for a separate action to deposit the sediment and maintaining sediment within similar sediment type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No response is required. See response to REP2-065:3.1 for further details.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| REP2-065:3.4 | 3.4 If Option 1 is taken forward and it is found that deposition would result in habitat loss/change then we advise that it is likely that the only alternative option available (Option 3) to avoid habitat change/loss would be to dispose of sediment outside of the designated SAC, which would in itself result in a permanent loss of Annex I feature from the designated site. Having already advised against Option 3 due to the conservation objectives of the site being hindered, we would welcome further consideration by the Applicant of securing mitigation measures to avoid permanent habit loss/change from sandwave levelling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No response is required. See response to REP2-065:3.1 for further details.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| I.D.         | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| REP2-065:3.5 | <p>3.5 Natural England notes in [AS-156] 'The Applicants' Responses to January 2025 Action Points (Revision 2) (Tracked)' that the preferred method of dredging in seabed preparation is by using a Trailing Suction Hopper Dredger (TSHD) with the technique of bottom deposition to discharge the sediments "<i>usually done in close proximity to the area from which the sediment was obtained</i>" and can be done in a "<i>controlled way over a distance, rather than discharging in one go in a concentrated fashion</i>". Which is the opposite required to deliver Natural England advice to both ensure the sediment remains within the system and to enable sandbank recovery. We also note that the response states that use of a fall pipe to dispose of sediment after dredging is not practicable as they are not equipped on a TSHD and that fall pipes are typically used to deliver rock to the seabed during cable / scour protection installation. However, Natural England notes that for Five Estuaries and Outer Dowsing (and other offshore consented OWFs) there is a commitment to use a downpipe to ensure that sediment can be deposited in a target location upstream of the sediment and within similar sediment type. Therefore, there is an expectation that this is a deliverable for all projects.</p> | <p>The Applicants note that no likely significant effects are anticipated in connection with this activity as assessed for the worst case presented in the ES. Hence, no mitigation need necessarily be provided. However, as noted in the response to REP2-065:3.1 (above) the Applicants have committed to depositing like sediment on like sediment within the boundary of the Dogger Bank SAC, thus ensuring, as Natural England have requested, that sediment both remains within the system and sandbank recovery is enabled.</p> <p>As regards the use of a fall pipe, or 'down pipe', the Applicants' dredging specialists are not aware of a TSHD vessel that that would meet the requirements of the Projects that possesses a fall pipe or down pipe deposition facility. If Natural England are able to demonstrate the existence of such vessels that might meet the needs of the Projects, then the Applicants will further consider the practicability of this request. The Applicants cannot commit to delivering mitigation that they do not regard as technically feasible.</p> <p>The Applicants cannot comment on the positions adopted by, or specific requirements of, other projects in relation to this matter.</p> <p>The Applicants reiterate that they have committed to depositing like sediment on like sediment within the boundary of the Dogger Bank SAC, thus ensuring, as Natural England have requested, that sediment both remains within the system and sandbank recovery is enabled.</p> |
| REP2-065:3.6 | <p>3.6 Therefore, where sandwave levelling is unavoidable, we reiterate our previous advice that dredged material should be placed at a location that enables it to remain within the sediment system (unless this leads to impacts on another feature). We also continue to advise monitoring to support predictions and conclusions of sandwave recovery.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>The Applicants note that they have previously made a commitment, secured via conditions within each DML, to disposing of all sediment dredged within the Dogger Bank SAC within the boundaries of the SAC. The Applicants have now made the further commitment to disposing of like sediments on like sediments within the boundaries of the Dogger Bank SAC. These commitments will meet this request, enabling sediment to remain within the sediment system. See response to REP2-065:3.1 for further details.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| REP2-065:4.1 | <p><b>Sandbank Recovery</b></p> <p><u>Natural England's Risk and Issues Log Deadline 2, points C11, C16, C23,</u></p> <p>4.1 Having reviewed the Applicant's additional submission [AS-025] 10.36 Review of evidence on recovery of sandbank habitat following habitat damage, we are not sufficiently persuaded by the Applicant's arguments to revise our advice provided within our relevant and written representation [RR-039]. Therefore, we confirm that Natural England's advice in relation to the potential for an AEol on Dogger Bank SAC resulting from disturbance/damage to Annex I Sandbanks from cable installation remains unchanged to that provided within our relevant/Written representation [RR-039], In addition, we do not believe that the evidence provided allows for Plan Level HRA conclusions (as signed off by the Secretary of State) to be 'superseded' by the project level assessment as proposed by the Applicant at [AS-025] Paragraph 39 Page 17.</p>                                                                                                                                                                                                                                                                                                                                               | <p>No response is required. See response to REP2-065:4.2 below and responses within <b>Table 2-10</b> for further details.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| REP2-065:4.2 | <p>4.2 Equally we maintain that recovery of the Dogger Bank SAC is likely to be 10-25 years. Please see the evidence provided in the 2019 Article 17 reporting: <a href="https://jncc.gov.uk/jncc-assets/Art17/H1110-OFF-Habitats-Directive-Art17-2019.pdf">UK Offshore information for H1110 - Sandbanks which are slightly covered by sea water all the time as part of the Fourth Report by the United Kingdom under Article 17 of the EU Habitats Directive</a> <a href="https://jncc.gov.uk/jncc-assets/Art17/H1110-OFF-Habitats-Directive-Art17-2019.pdf">https://jncc.gov.uk/jncc-assets/Art17/H1110-OFF-Habitats-Directive-Art17-2019.pdf</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>The Applicants highlight that Natural England have not provided any further evidence to support their position.</p> <p>The paper cited is generic (not specific to Dogger Bank SAC) covering the wide variety of sandbank habitat present in different environmental conditions across UK waters. Sandbank habitat in more sheltered waters than the Dogger Bank will take longer to recover from physical damage as it is less exposed to natural disturbance. It does not include any evidence from any offshore industry (other than fisheries or aggregates, which have very different effects in terms of form and frequency) regarding physical disturbance and recovery. The sources within the paper are old (over ten years) and, in many cases, are meta analyses / reviews (and not specific to either Dogger Bank or sandbanks)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| I.D. | Natural England Response | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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|      |                          | <p>rather than direct studies. One reason to undertake monitoring as part of marine licencing is to provide better understanding of the effects of development and inform future decision making, therefore the absence of reference to recent and relevant studies (such as any offshore wind post-construction monitoring) is surprising.</p> <p>The Applicants reiterate that as well as referencing historic offshore wind survey from around the UK, their evidence base (provided in <b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085], <b>RIAA HRA Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish</b> [APP-046 updated in AS-051] and <b>Review of evidence on recovery of sandbank habitat following habitat damage</b> [AS-025]) also includes recent, site specific and specially commissioned work from the Dogger Bank as well as UK Government research on disturbance at Dogger Bank.</p> <p>Whilst the site specific evidence the Applicants present in the <b>Review of evidence on recovery of sandbank habitat following habitat damage</b> [AS-025] is limited to a few cases (because the consented Dogger Bank projects are currently in construction and limited monitoring has been reported to date) it nonetheless demonstrates physical recovery in very short timescales (months to &lt;4 years). As the Applicants have stated previously if there is physical recovery then there is no barrier to ecological recovery in sandy sediment habitats.</p> <p>The assessments are based upon MarESA approach, for the most common biotope within the Array Areas (MB5233 <i>Nephtys cirrosa</i> and <i>Bathyporeia spp.</i> in Atlantic infralittoral sand), MarESA states (emphasis added)<sup>16</sup></p> <p><i>As a consequence of the dynamic nature of the habitat the faunal component of the biotope is very sparse and low in species richness. Therefore, the community might be considered 'mature' only a few days or weeks after the last storm event, as the mobile species displaced from the biotope and those from adjacent area colonize the substratum via the surf plankton. Even following severe disturbances recovery would be expected to occur within a year; biotope resilience is therefore assessed as 'High' for any level of impact</i></p> <p>NE seem to derive their estimates of recovery timescales of 10 - 25 years based upon a need for 100% of a habitat and its most sensitive components to recover. However, it is worth noting that the MarESA Guidance Manual (Tyler-Walters <i>et al</i> 2023<sup>17</sup>) states the following:</p> <p><i>'Full recovery' is envisaged as a return to the state of the habitat that existed prior to impact. However, this does not necessarily mean that every component species has returned to its prior condition, abundance or extent but that the relevant functional components are present and the habitat is structurally and functionally recognizable as the initial habitat of interest. The assessments are based on key structural or functional or important characteristic species for each biotope</i></p> <p>In the case of the most sensitive habitat identified within the Array Areas (MC1251 Piddocks with a sparse associated fauna in Atlantic circalittoral very soft chalk or clay) the Applicants have committed to micro-siting to avoid impacts to this feature.</p> <p>The Applicants have updated Table A-1 of the <b>Review of evidence on recovery of sandbank habitat following habitat damage</b> AS-025] with further detail from the MarESA assessments to further explain the rationale behind the conclusions reached in in EIA and HRA assessments (<b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085] and <b>RIAA HRA Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish</b> [APP-046 updated in AS-051]. This was requested by Natural England (see <b>Table 2-10</b>). This is provided in <b>Review of evidence on recovery of sandbank habitat following habitat damage (Revision 2)</b> [document reference 10.36] submitted at Deadline 3.</p> |

<sup>16</sup> [https://www.marlin.ac.uk/habitats/detail/154/nephtys\\_cirrosa\\_and\\_bathyporeia\\_spp\\_in\\_infralittoral\\_sand](https://www.marlin.ac.uk/habitats/detail/154/nephtys_cirrosa_and_bathyporeia_spp_in_infralittoral_sand)

<sup>17</sup> H. Tyler-Walters, H.M. Tillin, E. A.S. d'Avack, Perry, F., Stamp, T. (2023) Marine Evidence-based Sensitivity Assessment (MarESA) - Guidance Manual <https://www.marlin.ac.uk/assets/pdf/MarLIN-MarESA-Manual-Jun2023.pdf>

| I.D.         | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| REP2-065:4.3 | 4.3 Further evidence will be available when the Favourable Condition Status for Annex I Sandbanks is published which is likely to be later this year.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | The Applicants acknowledge this comment and hope that this evidence includes consideration of relevant and recent post-construction monitoring.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| REP2-065:5.1 | <p><b>Zone of Influence</b></p> <p><u>Natural England's Risk &amp; Issues Log Deadline 2, point C24</u></p> <p>5.1 We welcome the Applicant's clarification that the 8km Zone of Influence (Zol) is incorrect. The Applicant has stated in their response [AS-048] that the correct Zol is 14km and this has been used in Chapter 8 Marine Physical Environment [APP-080] and Chapter 9 Benthic and Intertidal Ecology [APP-085], which does provide some reassurance. However, it is unclear how this correct Zol value of 14km relates to the values presented in Tables 8-3-17 and 8-3-18 and in Annex D Results of Dispersion Model Assessment Runs of [AS-136] 7.8.8.3 Environmental Statement Appendix 8-3 – Marine Physical Processes Modelling Technical Report (Rev 2) (Tracked).</p>                                | <p>At the time of writing <b>Chapter 8 Marine Physical Environment</b> [APP-080], the outputs of the modelling were used to determine the maximum plume extent. This was defined as 8km for the surface layer. However, the tidal ellipse data showed the maximum length of an ellipse was 14km (off the coast of Flamborough Head). Therefore, the more conservative value of 14km was used to determine the search distance from the entire DCO boundary to screen receptors, noting the length of the ellipse in the Array Areas was much lower at 2km.</p> <p>Within <b>Appendix 8-3 Marine Physical Processes Modelling Technical Report (Revision 3)</b> [REP2-017] further detail was included to show the extent of the plume at different levels in the water column (surface, middle and bottom layer) for three localities (Nearshore, Half way between shore and Offshore) (see Table 8-3-17 of <b>Appendix 8-3 Marine Physical Processes Modelling Technical Report (Revision 3)</b> [REP2-017]). These results show that the maximum extent of the plume occurs in the bottom layer close to the coast, where it can extend up to 28km. Using these updated values, 28km would be the maximum Zol for changes in suspended sediment concentrations and seabed level due to cable installation in the nearshore. However, applying a 28km Zol to the entire Offshore Development Area would not be appropriate as offshore the maximum plume size is only 2km in the bottom layer. This 2km plume would be applicable to the Array Areas. The results of the plume dispersion modelling indicate therefore the application of a 14km Zol offshore, based on the tidal ellipse, was a very conservative approach.</p> <p>In the nearshore, if the Zol was increased to 28km to represent the maximum plume extent in the bottom layer, this would not change the assessment as all the receptors currently assessed are located within 28km of the Offshore Development Area boundary in the nearshore (e.g. Flamborough Head, Holderness Inshore Marine Conservation Zone (MCZ) and Holderness Offshore MCZ). Designated sites associated with the Humber Estuary are located 40km away from the landfall. Therefore, increasing the Zol in the nearshore would not screen in new receptors for assessment. Furthermore, there are no additional projects located within 28km of the coastal zone that are not already considered in the Cumulative Effects Assessment (CEA).</p> |
| REP2-065:5.2 | 5.2 The zone of potential influence identified in [APP-080] (7.8 Environmental Statement Chapter 8 – Marine Physical Environment) is 14km. However, the Applicant has stated in their response [AS-048] and paragraph 173 of [APP-080] that the maximum extent of the plume during peak tidal currents reaches 18km from the cable corridor to the east of Flamborough Head. Furthermore, the Applicant has added [AS-048] that <i>"at such distances the sediment concentration would be below 1mg/l and thus indistinguishable from the existing background levels of sediment in the water column."</i> Natural England requires further clarification from the Applicant whether, based on this comment above, 18km should be used as the zone of greatest influence for sediment plumes (or at least for the nearshore). | <p>At the time of writing <b>Chapter 8 Marine Physical Environment</b> [APP-080], the outputs of the modelling were used to determine the maximum plume extent. This was defined as 8km for the surface layer. However, the tidal ellipse data showed the maximum length of an ellipse was 14km (off the coast of Flamborough Head). Therefore, the more conservative value of 14km was used to determine the search distance from the entire DCO boundary to screen receptors, noting the length of the ellipse in the Array Areas was much lower at 2km.</p> <p>Within <b>Appendix 8-3 Marine Physical Processes Modelling Technical Report (Revision 3)</b> [REP2-017] further detail was included to show the extent of the plume at different levels in the water column (surface, middle and bottom layer) for three localities (Nearshore, Halfway between shore and Offshore) (see Table 8-3-17 of <b>Appendix 8-3 Marine Physical Processes Modelling Technical Report (Revision 3)</b> [REP2-017]). These results show that the maximum extent of the plume occurs in the bottom layer close to the coast, where it can extend up to 28km. Using these updated values, 28km would be the maximum Zol for changes in suspended sediment concentrations and seabed level due to cable installation in the nearshore. However, applying a 28km Zol to the entire Offshore Development Area would not be appropriate as offshore the maximum plume size is only 2km in the bottom layer. This 2km plume would be applicable to the Array Areas. The results of the plume dispersion modelling indicate therefore the application of a 14km Zol offshore, based on the tidal ellipse, was a very conservative approach.</p> <p>In the nearshore, if the Zol was increased to 28km to represent the maximum plume extent in the bottom layer, this would not change the assessment as all the receptors currently assessed are located within 28km of the Offshore</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| I.D.                 | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                     |                             |                                      |                                     |                             |                 |     |     |      |      |                      |     |                    |        |
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|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Development Area boundary in the nearshore (e.g. Flamborough Head, Holderness Inshore MCZ and Holderness Offshore MCZ) and no additional sites are situated within this range. Designated sites associated with the Humber Estuary are located 40km away from the landfall. Therefore, increasing the Zol in the nearshore would not screen in new receptors for assessment. Furthermore, there are no additional projects located within 28km of the coastal zone that are not already considered in the CEA. Hence, the existing assessment remains relevant.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                     |                             |                                      |                                     |                             |                 |     |     |      |      |                      |     |                    |        |
| REP2-065:5.3         | 5.3 Natural England notes that the Applicant states in [AS-048] that the change in Zol would not alter the assessment outcomes presented in RIAA HRA Part 2 of 4 [APP-046], or the designated sites screened in for assessment given the distances of those sites from the Projects. We advise that the Applicant should justify this conclusion by providing a list or table showing the designated sites screened in for assessment within the RIAA alongside the incorrect and correct Zol values to enable us to better understand the implications of the changes to the Zol to the assessment. | <p>As noted in section 4.1.3.2 of the <b>Appendix A - HRA Screening</b> [APP-049], a precautionary Zol for sediment dispersion of 15km was used to screen in sites designated for offshore Annex I habitats. The amended Zol for sediment dispersion was 14km, as detailed in RR-039: C39 in the Applicants <b>Response to Natural England's Relevant Representations</b> [AS-048]. As such, all sites potentially affected by sediment dispersion from the Projects' construction activities were screened in within the original screening exercise. The Applicants do however note the response detailed in REP2-065:5.2 above where it is acknowledged the Zol for sediment dispersion in the nearshore specifically was calculated to be 28km. As noted on the above response, this amended Zol does not result in the screening of any additional receptors over those included in the original screening exercise.</p> <p>The sites considered in the <b>Appendix A - HRA Screening</b> [APP-049] and the amended Zol are presented in the below table.</p> <table><tr><th>Site Screened In</th><th>Distance from the Projects</th><th>Previous Zol for Sediment Dispersion</th><th>Updated Zol for Sediment Dispersion</th><th>Precautionary Screening Zol</th></tr><tr><td>Dogger Bank SAC</td><td>0km</td><td rowspan="3">8km</td><td rowspan="3">28km</td><td rowspan="3">15km</td></tr><tr><td>Flamborough Head SAC</td><td>3km</td></tr><tr><td>Humber Estuary SAC</td><td>44.6km</td></tr></table>                                                                                                                                                         | Site Screened In                    | Distance from the Projects  | Previous Zol for Sediment Dispersion | Updated Zol for Sediment Dispersion | Precautionary Screening Zol | Dogger Bank SAC | 0km | 8km | 28km | 15km | Flamborough Head SAC | 3km | Humber Estuary SAC | 44.6km |
| Site Screened In     | Distance from the Projects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Previous Zol for Sediment Dispersion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Updated Zol for Sediment Dispersion | Precautionary Screening Zol |                                      |                                     |                             |                 |     |     |      |      |                      |     |                    |        |
| Dogger Bank SAC      | 0km                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 8km                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 28km                                | 15km                        |                                      |                                     |                             |                 |     |     |      |      |                      |     |                    |        |
| Flamborough Head SAC | 3km                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                     |                             |                                      |                                     |                             |                 |     |     |      |      |                      |     |                    |        |
| Humber Estuary SAC   | 44.6km                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                     |                             |                                      |                                     |                             |                 |     |     |      |      |                      |     |                    |        |
| REP2-065:5.4         | 5.4 We also highlight that it remains unclear where sediments will be deposited and to what depth. We advise that smothering and siltation should be assessed against the MarESA benchmarks, and unless the spatial sediment deposition relative to these benchmarks has been predicted, then assessments of smothering on benthic receptors within the Zol cannot be considered robust.                                                                                                                                                                                                             | <p>Plots showing changes to seabed level (depth and extent) due to construction activities are provided in <b>Appendix 8-2 Marine Physical Processes Modelling Technical Report</b> [REP2-017], these have been used to inform the assessment of smothering and siltation.</p> <p>As noted in section 9.6.2.2.1.1 of <b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085], the MarESA pressures 'smothering and siltation rate changes (light)' and 'smothering and siltation rate changes' (heavy)' were used to assess the significance of effect for the Impact '<i>Increased Suspended Sediment Concentrations (Including Sediment Deposition and Smothering)</i>', with 'light' smothering being defined as up to 5cm of fine material added to the habitat in a single, discrete event and 'heavy' smothering being defined as up to 30cm of fine material added to the habitat in a single, discrete event (MarLIN, 2024<sup>18</sup>). As also noted in section 9.6.2.2.1.1 of <b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085], during trenching for cable installation, smothering and sediment deposition is predicted to be up to 5cm within the Offshore Export Cable Corridor (i.e. 'light' smothering as per the MarESA benchmarks) with a maximum change of up to 25cm occurring immediately adjacent to the cable trench itself (i.e. 'heavy' smothering as per the MarESA benchmarks).</p> <p>As such, outside of the immediate vicinity of the cable trench itself benthic receptors would only be exposed to 'light' sediment smothering as per the MarESA benchmarks. Both 'heavy' and 'light' sediment deposition pressures were</p> |                                     |                             |                                      |                                     |                             |                 |     |     |      |      |                      |     |                    |        |

<sup>18</sup> MarLIN (2024) MarESA pressures and benchmarks. Available at: [https://www.marlin.ac.uk/sensitivity/SNCB-benchmarks#toc\\_smothering-and-siltation-rate-changes](https://www.marlin.ac.uk/sensitivity/SNCB-benchmarks#toc_smothering-and-siltation-rate-changes).

| I.D.         | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| REP2-065:6   | <p><b>Cable / scour protection replacement</b></p> <p><u>Natural England's Risk &amp; Issues Log Deadline 2, point A0, A7, A15, A21, C4, C5</u></p> <p>6.1 We note in the Applicant's response [AS-048] that <i>"it is intended that no new marine licences will be sought for any additional or replenishment protection required during the operational phase in areas that were protected as part of construction, unless such protection would exceed the maximum amounts authorised by the DMLs. The Applicants are of the opinion that a distinction should not be drawn in protection maintenance licencing terms between areas within or beyond any Marine Protected Areas as long as any future protection levels fall below the worst case scenario levels assessed within the Environmental Statement (ES) and the Report to Inform Appropriate Assessment (RIAA). The impacts of this protection will be compensated for as part of the Dogger Bank (DBS) South benthic Special Area of Conservation (SAC) compensation proposals"</i>.</p> <p>6.2 Furthermore, the Applicant considers that <i>"If additional cable protection for maintenance purposes was required beyond the maximum limits authorised by the DMLs then a separate marine licence or licences would be required"</i>.</p> <p>6.3 Natural England do not agree with this and continue to advise as previously. With regard to deployment end date, the Applicant's response is that they envisage <i>"that these applications would cover 10 year periods post-construction"</i>. Natural England draws the ExA and Applicant's attention to our Deadline 2 Appendix C2.2 'Natural England's advice on cable protection assessment for offshore windfarms and inclusion in marine licenses'.</p> | <p>The Applicants' position remains that replenishment of cable and scour protection up to the limits set out within the DMLs could be deposited within the footprints of deposition established at the construction stage. These footprints would be established through the discharge of the Reporting of Scour and Cable Protection conditions in each DML (for example, see Condition 23 in DML 1 (Schedule 10) within the <b>Draft DCO (Revision 6)</b> [document reference 3.1]) with the volumes of deposition also managed through these conditions. The effects of protection introduced through this mechanism will be compensated for as part of the DBS benthic SAC compensation proposals. The effects of such protection will have been comprehensively assessed as a permanent effect compensated for through the DBS DCO consenting process. The Applicants maintain that further assessment and compensation discussions relating to project activities that have been previously assessed, licenced and compensated for would be neither proportionate or necessary.</p> <p>The Applicants reiterate that protection required in 'new areas' where no protection had previously been placed, would be licenced in ten year blocks following the completion of construction. This will help to ensure management of impacts whilst preserving the flexibility that the Applicants require in order to adequately maintain and operate a complex asset in a dynamic environment.</p> <p>Please see the Applicants' response to RR-039: C13 in <b>Response to Natural England's Relevant Representations</b> [AS-048] for the full proposal.</p> |
| REP2-065:7.1 | <p><b>Decommissioning cable/scour protection</b></p> <p><u>Natural England's Risk &amp; Issues Log Deadline 2, point B7, C27</u></p> <p>7.1 Natural England notes the Applicant's response [AS-048] that they do not consider that they can commit to decommissioning cable/scour protection at this time as technology and/or our understanding of the impacts may change. Further, they do not consider it necessary as the loss of habitat will be compensated for. Natural England disagrees with both aspects of this stance.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>The Applicants have previously stated in the <b>Response to Natural England's Relevant Representations</b> [AS-048] (RR-039: NE7) that:</p> <p><i>'The Applicants acknowledge this comment. The Applicants understand the sensitivities of the benthic habitats of the Offshore Development Area. In recognition of these sensitivities the Applicants have committed to embedded mitigation to minimise use of scour and external cable protection where practicable. Cable and scour protection methods and designs will be developed post-consent. <b>The Applicants will give due consideration to the use of removable cable and scour protection measures during the detailed design stages of the Projects post-consent.</b>'</i></p> <p>Engineering assessment and design work relating to cable and scour protection is on-going. This work will not be finalised until the pre-construction phases of the Projects. As stated above consideration, will be given to the use of removable cable and scour protection measures during the detailed design stages of the Projects. The Final Cable Statement(s) and final Scour Protection Plan(s) presented for the approval of MMO prior to the commencement of construction (where required under each DML) will provide the final details of cable and scour protection proposed.</p>                                                                                                                                                                                                                                                                                                             |

| I.D.         | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>The Applicants note that Natural England will have the opportunity to comment on the finalised proposals brought forward for approval and DML condition discharge at this juncture.</p> <p>Further, in terms of decommissioning, a plan will be provided for Secretary of State approval under S105 of the Energy Act 2004 <b>prior to construction</b>. This commitment is secured in <b>Draft DCO (Revision 6)</b> [document reference 3.1] which contains Requirement 7 which states that the Projects:</p> <p><i>'must not be commenced until a written decommissioning programme in compliance with any notice served upon the undertaker by the Secretary of State pursuant to section 105(2)(a) (requirement to prepare decommissioning programmes) of the 2004 Act has been submitted to the Secretary of State for approval'.</i></p> <p>The most appropriate time to consider the matters raised by Natural England is when detailed design is being undertaken and decommissioning proposals are developed. The Applicants highlight that post-consent controls are in place which will allow Natural England the opportunity to scrutinise project proposals at the appropriate juncture.</p> <p>As noted by Natural England, compensation will be provided for any permanent habitat loss associated with the development of the Projects, including those impacts associated with the deployment of cable and scour protection within the Dogger Bank SAC. Due to the nature of the strategic compensation to be applied, the compensation quantum is likely to be based on the worst case consent envelope for cable and scour protection rather than the actual footprint of impact. Therefore, it is likely that this compensation will exceed actual footprint of impact caused by the Projects. It is also likely that the compensation will be secured on a permanent basis, beyond the life of the Projects, thus compensating for any enduring effects of protection should any be left in situ.</p> <p>Hence, Natural England can take comfort from the fact that enduring compensation will be provided for the impacts associated with the deposition of cable and scour protection on the Dogger Bank SAC, in addition to the likelihood that any compensation will over deliver in the likely event that cable and scour protection deposition be utilised at a lower level than that indicated under the worst case scenario.</p> <p>In addition, the Applicants will continue to give due consideration to the use of removable cable and scour protection measures during the detailed design stages of the Projects post-consent, with Natural England afforded opportunities to comment on these proposals in relation to the Final Cable Statements and Scour Protection Plans. Should the use of removable cable and scour protection be deemed viable, then the footprint of compensation relative to the footprint of impacts would be further enhanced on decommissioning.</p> <p>Finally, the Applicants note that studies focussing on the use of removable protection do not consider issues associated with design, cost, maintenance and construction that may be associated with their use. For further information see <a href="https://publications.deltares.nl/Deltares250.pdf">https://publications.deltares.nl/Deltares250.pdf</a>. It is important to consider and reflect upon the fact that there are potential disbenefits associated with the use of removable protection in addition to any perceived benefits.</p> |
| REP2-065:7.2 | <p>7.2 Natural England acknowledges that technologies and understanding might change by the time the Project reaches decommissioning. However, we do not consider this to be sufficient reason for not committing to decommissioning. We highlight that advances in technology and engineering methods could allow for complete removal of offshore windfarm infrastructure in the future. It is our view that this is a more likely outcome than rock protection in a SAC designated for its sedimentary habitat being found to be beneficial. We advise that the removal of all on and above seabed infrastructure should be committed to in an outline decommissioning plan and secured in the DCO. We reiterate our Relevant Representation advice [RR-039; B68, C59] that consideration should be given to comments</p> | <p>The Applicants have a far reaching and clearly demonstrable commitment to minimising their environmental impacts. This commitment has been clearly demonstrated through the site selection and development work it has undertaken to avoid impacts where possible as reported within the ES. The likely significant effects of the Projects have been further reduced through the mitigation proposals brought forward by the Projects. These proposals are catalogued in the <b>Commitments Register (Revision 2)</b> [REP2-025] and in secured in relevant management plans.</p> <p>In addition, the Applicants further highlight their recent efforts to minimise their environmental impacts through the introduction of the recently accepted Change Request (<b>Project Change Request 1 – Offshore and Intertidal Works</b> [AS-141]), which were in large part brought forward as part of their comment to minimising the environmental</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| I.D. | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|      | <p>made in relation to minimising environmental impacts as much as possible through the choice of scour prevention/cable protection. Every effort should be made to avoid using those that are least likely to be recovered at the time of decommissioning. We refer the Applicant to Natural England's Scour and Cable Protection Decommissioning Study:</p> <p><a href="https://publications.naturalengland.org.uk/publication/5938793965420544">https://publications.naturalengland.org.uk/publication/5938793965420544</a>.</p> | <p>impacts of the Projects where possible, including those impacts associated with the deployment of cable and scour protection.</p> <p>The Applicants reiterate their response on this issue as stated in the <b>Response to Natural England's Relevant Representations</b> [AS-048] (RR-039: NE7). This response is re-stated below:</p> <p><i>'The Applicants acknowledge this comment. The Applicants understand the sensitivities of the benthic habitats of the Offshore Development Area. In recognition of these sensitivities the Applicants have committed to embedded mitigation to <b>minimise use of scour and external cable protection where practicable</b>. Cable and scour protection methods and designs will be developed post-consent. The Applicants will give <b>due consideration to the use of removable cable and scour protection measures during the detailed design stages of the Projects post-consent</b>.'</i></p> <p>Final Cable Statements are required for approval prior to the commencement of construction as conditions within each DML. The final Cable Statements will present the details of any cable protection proposed, including those details relating to the type, quantity and location of cable protection proposed.</p> <p>Similarly, Scour Protection Plans are required for approval prior to the commencement of construction under each relevant DML. The Scour Protection Plans will present the details of scour protection proposed including types, proposed sources, locations and quantities of scour protection proposed.</p> <p>The proposals put forward in any Final Cable Statements and Scour Protection Plans will apply the mitigation proposals identified within the ES. <b>The Applicants' embedded mitigation proposals to minimise the use of cable and scour protection as far as is practicable will be demonstrated within these documents. These documents will also demonstrate how due consideration has been given to the use of removable cable and scour protection measures.</b></p> <p>The Final Cable Statement(s) and final Scour Protection Plan(s) presented for the approval of MMO prior to the commencement of construction (where required under each DML) will provide the final details of cable and scour protection proposed. The Applicants note that Natural England will have the opportunity to comment on the finalised proposals brought forward for approval and DML condition discharge at this juncture.</p> <p>The Applicants note, that in addition to engaging in further efforts to minimise the impacts of the deployment of cable and scour protection, these impacts will be compensated for at a level which is likely to exceed the quantum of impact both in terms of geographical extent and duration. See response to REP2-065:7.1 for further details.</p> <p>As regards decommissioning, a plan will be provided for Secretary of State approval under S105 of the Energy Act 2004 <b>prior to construction</b>. This commitment is secured in <b>Draft DCO (Revision 6)</b> [document reference 3.1] which contains Requirement 7 which states that the Projects:</p> <p><i>'must not be commenced until a written decommissioning programme in compliance with any notice served upon the undertaker by the Secretary of State pursuant to section 105(2)(a) (requirement to prepare decommissioning programmes) of the 2004 Act has been submitted to the Secretary of State for approval'</i>.</p> <p>The Applicants consider it most appropriate to give detailed consideration to matters pertaining to decommissioning following the completion of design work, with further consideration given to the matter across the life of the Projects. The reasons for this include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Final designs for the Projects not being available. Without knowing what is to be built, it is not possible to develop clear plans for decommissioning;</li> <li>Decommissioning is unlikely to be undertaken for several decades. At the present time the technologies available to enact decommissioning cannot be understood; and</li> </ul> |

| I.D.         | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>Best-practices and the legislative regimes relating to decommissioning will be better understood closer to the timing of decommissioning.</li> </ul> <p>The Applicants maintain that the deferral of the production of this programme to the post-consent / pre-construction phases of the Projects is the most appropriate and meaningful time for its delivery. In terms of decommissioning, the Applicants reiterate that the Decommissioning Programme and the Final Cable Statement and Scour Protection Plan will also demonstrate how due consideration has been given to the use of removable cable and scour protection measures, in addition to details relating to the Applicants decommissioning proposals. Thus, it is clear that there are post-consent controls in place in relation to the matters of concern to Natural England and they will have the opportunity to comment on the plans of the project at the most appropriate time.</p> <p>Through the steps presented above the Applicants have clearly demonstrated how the mitigation hierarchy will be applied to the impacts of cable and scour protection in relation to habitat loss, showing how these impacts will be avoided, reduced and mitigated as far as is practicable, and how the strategic compensation to be provided for the DBS Projects is likely to deliver on a highly precautionary basis both in terms of extent and duration. In addition, post consent controls are in place which could ensure the further reduction of the environmental impacts of the proposed Projects where practicable.</p> <p>Finally, the Applicants acknowledge Natural England's decommissioning study, but note that the focus of the study is only the feasibility of the removal of protection. In terms of environmental impact avoidance, reduction, mitigation and compensation it does not take a holistic view as it does not consider issues and impacts associated with design, cost, maintenance and construction that may be associated with their use. For further information see <a href="https://publications.deltares.nl/Deltares250.pdf">https://publications.deltares.nl/Deltares250.pdf</a>. It is important to consider and reflect upon the fact that there are potential disbenefits associated with the use of removable protection in addition to any perceived benefits when developing designs for cable and scour protection.</p> |
| REP2-065:7.3 | 7.3 Whilst we acknowledge that a conclusion of Adverse Effect on Integrity on Dogger Bank SAC has already been confirmed in the Plan Level HRA and that compensation will be provided for the habitat loss from cable and scour protection, the Defra guidance for marine compensatory measures is clear that the mitigation hierarchy must be applied to avoid and reduce impacts as much as possible, even if compensation measures are being implemented ( <a href="#">Best practice guidance for developing compensatory measures in relation to Marine Protected Areas</a> ) (2021). This is further supported by <a href="#">090224 OWEIP Consultation on updated policies to inform guidance for MPA assessments .pdf</a> , which includes a step wise approach to avoiding, reducing and minimising impacts and the scale of compensation required. | See the response to REP2-065:7.2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| REP2-065:7.4 | 7.4 In addition, we highlight the Secretary of State decisions for Hornsea 3, Norfolk Vanguard and Norfolk Boreas, which require cable protection to be decommissioned even though compensation is being provided, because the associated designated sites are in unfavourable condition and have a restore objective.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | The Applicants acknowledge this comment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| REP2-065:8.1 | <b>Drill arisings</b><br><a href="#">Natural England's Risk &amp; Issues Log Deadline 2, point C25</a><br>8.1 We maintain our previous advice that the placement of drill arisings adjacent to turbines may result in further habitat loss/change unless the Applicant can commit to placing drill arisings in areas of similar habitat / particle size, as was committed to by Dogger Bank A, B, C                                                                                                                                                                                                                                                                                                                                                                                                                                                         | For turbines the Applicants have assumed a 11m monopile with 63m diameter scour protection (i.e. this extends outwards up to 26m from the base of the turbine). This equates to a footprint of 3,117m <sup>2</sup> per turbine. If drilling is required arisings will be within this footprint. Within the assessment there is already an assumption of 100% permanent habitat loss within these footprints, there is therefore no need to add additional habitat loss as this would be double counting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| I.D.         | Natural England Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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|              | and Sofia. We do not consider that the Applicant's comparison to Hornsea 4 is appropriate. The Hornsea 4 array area is considerably more inshore than DBS so will likely be subject to greater wave action, it also is not within an SAC formed of underlying glacial clay/till sediments which might not dissipate if brought to the surface.                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| REP2-065:8.2 | 8.2 Further, evidence from LID and Lincs OWFs shows that the arisings are still present 14 years later, and may have facilitated a change in benthic communities. We therefore disagree that even within dynamic sandbank systems, which Dogger Bank is not, it can be assumed that drill arisings will be winnowed away. We advise that if drill arisings cannot be deposited in a similar habitat, they should be considered a permanent loss of habitat at the disposal location within the assessment. We also advise that a commitment to monitoring the dissipation of drill disposal mounds should be secured, as was done on the original Dogger Bank projects. | <p>As above, in the event of scour protection being used, any arisings would be within this footprint. Should scour protection not be needed the footprint of arisings would be considerably smaller than that of the scour protection and within what has been assessed for habitat loss.</p> <p>Benthic monitoring is already included within the <b>In Principle Monitoring Plan (IPMP) (Revision 2)</b> [REP2-043]. The exact survey specification has yet to be determined but the Applicants' methodology would be informed by current monitoring underway and proposed for Dogger Bank A, B, C and Sofia and feedback from Natural England and MMO to determine any lessons learned and ensure that the monitoring is fit for purpose.</p> <p>Specific reference to dissipation of drill disposal mounds can be added for operational monitoring if required and the IPMP updated at Deadline 4.</p> |

Table 2-8 Natural England's Advice On: [AS-081] 8.27 Outline Scour Protection Plan and [AS-028] 8.24 Outline Offshore Operations and maintenance plan (Table 1)

| NE Ref Section | Section                                                     | Key Concern and/or Update                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Natural England's Advice to Resolve Issue                                                                                                                                                                                                                                                                                                                                                                                | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| 1              | [AS-081]<br>1.3 and 1.4<br>[AS-028]<br>Table 2.3<br>updates | <p>Natural England notes that this document is intended to lay out the key principles of foundation protection both immediately post-construction and throughout the operational life of the Project. We note that the Applicant is predicting secondary scour but maintaining that the Maximum Design Scenario (MDS) of 768,736m<sup>2</sup> scour protection footprint is still accurate.</p> <p>Whilst we note that the Applicant proposes monitoring of scour protection measures and subsequent secondary scour, detail on how secondary scour will be addressed and whether this is included within the MDS has not been stated and is not clear. Application documents such as the Project Description [APP-071] only address replenishment of cable protection, not that around turbine structures.</p> <p>Of particular concern is the Applicant's claims that replenishment would occupy the same footprint as the original rock protection. However, if rock protection became dispersed or lost integrity, Natural England consider it unlikely that the footprint of</p> | <p>Natural England advises that detail on all scenarios in which rock replenishment/additional scour protection may be required is provided in order to determine whether the MDS for rock protection replenishment is realistic. In addition, this information is required to determine on how aligned the proposals are with Natural England's advice on cable protection provided at Appendix C2.2 to Deadline 2.</p> | <p>The worst case scenario would not be exceeded through the life of the Projects. As such, this figure gives account to any secondary scour protection that might be required. In any event, secondary scour (around the edge of the scour protection itself) will be minimised through the scour protection design, such as through minimising the height of the scour protection and making the side slopes relatively gentle.</p> <p>The Applicants note that through the recently accepted <b>Project Change Request 1 – Offshore and Intertidal Works</b> [AS-141] the worst case scenario for scour protection deployment has reduced significantly from 768,736m<sup>2</sup> to 639,682m<sup>2</sup>.</p> <p>As regards the construction of the worst case figures, as stated in RR-039: C13 in <b>Response to Natural England's Relevant Representations</b> [AS-048]:</p> <p><i>The maximum design parameters reflect the levels of scour and cable protection that could be required for the Projects during construction and / or operation. As such they represent the maximum proposed levels for installation during construction and no revisions are proposed to the levels presented within the worst case scenarios as a result.</i></p> <p>As stated in section 5.5.5.1 of <b>Chapter 5 Project Description (Revision 3)</b> [REP1-009]:</p> <p><i>All figures are presented on a worst case basis e.g. for wind turbine foundations, the maximum footprint described is that which would result from the installation of the highest possible number of small monopile foundations (all with scour protection), which is the scenario with the largest footprint on the seabed.</i></p> <p>As is acknowledged in the document titles, the <b>Outline Scour Protection Plan (Revision 3)</b> [REP2-052] and the <b>Outline Offshore Operations and Maintenance Plan (Revision 3)</b></p> |

| NE Ref Section | Section | Key Concern and/or Update                                                                                                                                                                                                                                                                                                     | Natural England's Advice to Resolve Issue | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|                |         | <p>habitat loss and/or impacts to the structure and/or function of the Annex I feature will not increase.</p> <p>Therefore, we advise it remains unclear how the MDS for further cable and/or structure (i.e. turbine) scour protection during the operational phase has been determined and whether the MDS is accurate.</p> |                                           | <p>[REP2-046] are outline documents pending finalisation prior to construction when final design details are available. The final documents in accordance with the outline documents will be presented to the MMO as part of the process of discharging relevant DML conditions.</p> <p>Please see the response to REP2-065:6 for an outline of the Applicants' intended approach to managing cable and scour protection deployment through the operational period of the Projects.</p> <p>The Applicants trust that Natural England will find this explanation clear.</p> |

Table 2-9 Natural England's Advice On: [AS-104] 10.38 Benthic Ecology Technical Note (Table 2)

| NE Ref Section | Section            | Key Concern and/or Update                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Natural England's Advice to Resolve Issue                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| 1              | 5.1.3.1.1 para 66. | <p>Natural England considers that the Applicant has still not sufficiently characterised benthic receptors within Flamborough Head SAC. All benthic receptors within the Zol, particularly those within designated sites, need to be sufficiently characterised to enable a robust, evidenced assessment to be undertaken and presented. In the absence of characterisation of benthic receptors at a suitable resolution, the WCS needs to be presented (e.g. most sensitive biotope within the broadscale habitat used as a basis for assessments) to consider the sensitivity or recoverability of the benthic receptors to the identified pressure pathways.</p> <p>Natural England advises that the application of the MarESA sensitivity assessment requires the key elements of the feature (in terms of life history, and ecology of the key and characterizing species) to be defined in order that the feature's resistance to a defined intensity of pressure (the pressure benchmark) can be assessed. In order for the MarESA sensitivity assessment to be applied, it is therefore necessary to identify the features present within the Zol to biotope level.</p> | <p>Natural England believes that this is readily resolvable and advises that to provide the necessary transparency in their assessments and assessment conclusions, the Applicant should state which specific habitats/biotopes were used to determine feature sensitivity according to MarESA.</p> <p>We also advise that the Applicant considers the nature of the secondary impacts (i.e. including frequency and duration) against the MarESA benchmark, and in cases where the benchmark is exceeded (i.e. where pressures are not single discrete events) a transparent justification of assessment conclusions is required. Without this information Natural England is unable to provide advice with certainty on the likelihood of the conservation objectives of the Flamborough Head SAC being hindered.</p> | <p>In <b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085], the Applicants have assessed impacts to all biotopes / habitats within the Offshore Development Area which may give rise to effects of significance in EIA terms. It is not proportionate to assess all habitats / biotopes within a 14km Zol from the Array Areas / 28km from the nearshore Offshore Export Cable installation activities when the only impact will be from indirect increases in Suspended Sediment Concentrations (SSCs) (and deposition). <b>Chapter 8 Marine Physical Environment</b> [APP-080] assessed the impacts of changes in SSCs, finding the significance of effect to be negligible. Any increases in SSCs are expected to be short-lived and are predicted to return to baseline conditions within hours of the disturbance due to dispersion and dilution. Therefore, any effects will be temporary.</p> <p>Within the <b>Benthic Ecology Technical Note</b> [AS-104], paragraph 4, the Applicants refer to the WCS in Table 9-1 of <b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085]. As Project Change Request 1 has also been accepted by the Examining Authority, the Applicants direct Natural England to the updates to the WCS as shown in Table 4-3 of <b>Project Change Request 1 – Offshore and Intertidal Works</b> [AS- 141].</p> <p>The Applicants have assessed the biotopes / habitats which comprise each qualifying feature of the protected area using the MarESA sensitivity assessment. For example, the assessment for Flamborough Head SAC uses the Natural England's Designated Sites View<sup>19</sup> website for cable laying, as this is the most relevant construction activity category, which then suggests 55 separate biotopes relevant to intertidal rock. These biotopes have a sensitivity to pressure range of not sensitive – medium to the impact of 'smothering and siltation rate changes (light)'. This sensitivity range has been presented in Table 5-3. The highest sensitivity (i.e. medium in this example) along with the magnitude of impact is what the significance of effect is based on.</p> |

<sup>19</sup> <https://designatedsites.naturalengland.org.uk/Marine/FAPMatrix.aspx?SiteCode=UK0013036&SiteName=flamborough&SiteNameDisplay=Flamborough+Head+SAC&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=>

| NE Ref Section | Section | Key Concern and/or Update                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Natural England's Advice to Resolve Issue | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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|                |         | <p>Natural England notes that the Applicant's Technical Note has still not done this (or transparently supplemented with a WCS), and as such, it is not clear how the sensitivity of SAC features to the relevant pressure benchmark(s) has been derived.</p> <p>Natural England also advises that the MarESA pressure benchmarks relate to single discrete events (i.e. single discrete deposition event), and that benthic receptors are likely to respond differently where pressures are repeated. We note that the Applicant has also not considered this within their assessments of secondary impacts within Marine Protected Areas.</p> |                                           | <p>The Applicants have updated the <b>Benthic Ecology Technical Note (Revision 2)</b> [document reference 10.38] which has been submitted at Deadline 3 to include the additional detail for the biotopes and species that comprise the qualifying features of the Holderness Offshore and Inshore MCZs and the Flamborough Head SAC .</p> <p>Regarding Natural England's comment on single discrete events, installation of the Offshore Export Cables and array / Inter-Platform Cables for the Projects would not take place simultaneously, they would occur over a period of several years. It can be considered that any potential 'light' smothering occurrences would occur as discrete events, as per the MarESA benchmarks.</p> |

Table 2-10 Natural England's Advice On: [AS-025] 10.36 Review of evidence on recovery of sandbank habitat following habitat damage (Table 3)

| NE Ref Section | Section | Key Concern and/or Update                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Natural England's Advice to Resolve Issue                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| 1              | General | <p>Natural England welcomes the further information provided by the Applicant to support their assessment conclusions in respect of loss of benthic habitat as a result of UXO clearance and/or jack-up operations. However, the evidence provided does not satisfy the requirements to evidence that depressions will fill with a similar sediment character.</p> <p>Natural England notes the Applicant's reference to MarESA in assessing likely sensitivity and recoverability of given habitats to abrasion. However, we highlight that the MarESA sensitivity and recoverability evidence does not consider the changes in topography or the long term secondary effects of those changes (i.e. infilling with finer sediments than present at baseline) which are of main concern. We note that the review of evidence presented from Dogger Bank B refers solely to recovery of the seabed topography/surface profile, not the long term/permanent changes in sediment character within the footprint of UXO clearance and/or jack-up operations.</p> | <p>We continue to advise that depressions caused by UXO and/or jack-up operations in areas of coarse or mixed sediments may need to be considered as permanent habitat change/loss unless it can be otherwise evidenced that they will backfill with similar sediment types.</p> <p>We continue to advise that recovery is unlikely within the irreplaceable NERC Section 41 habitats which have been identified within the red line boundary (i.e. Piddocks with a sparse associated fauna in sublittoral very soft chalk or clay).</p> | <p>Appendix B - Dogger Bank B Unexploded Ordnance (UXO) crater survey results of <b>Review of evidence on recovery of sandbank habitat following habitat damage</b> [AS-025] provides the results from several high-order clearances (i.e. worst case for UXO). These show a maximum crater depth of 0.8m remained following clearance (in 1.5m sand depth; typically sand layers at clearance locations were much deeper). It is expected that given these depths, any sediments expelled by the detonation would be similar in character to the surrounding surficial and near surface sediments which subsequently infill. Considering the limited fines content in seabed sediments, the sediment disturbed during detonation would be deposited within the immediate vicinity of the site of the detonation. This sediment would then become entrained by currents and transported as bedload, providing a source of sediment to infill the indentation until it becomes completely infilled over a period of months to a few years (see below), after which seabed morphology and sediment transport regime returns to baseline conditions. .</p> <p><b>Appendix 8-2 Met Mast Survey Analysis</b> [APP-083] did not report any physical evidence of jack-up operations post-decommissioning of the met masts despite each met mast having had at least four separate jack-up visits during their lifetime.</p> <p>Monitoring from Moray East (Moray Offshore Wind Farm (East) Limited, 2024) considered depressions from construction vessels, in this case the deepest penetrating jack up (11.2m) had infilled at a rate of almost 4m per year. As jack-ups are compressing the sediments beneath them, there is no exposure of deeper sediment layers. There was no reporting of whether the sediment in the depressions had altered in character, although scour pits associated with foundations in finer sediment were coarser than adjacent areas. This was not seen in coarser mixed sediments. Furthermore, the penetration depth of</p> |

| NE Ref Section | Section                      | Key Concern and/or Update                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Natural England's Advice to Resolve Issue                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| 2              | Section 2.3.3 and Appendix 1 | <p>Natural England advises it is not clear when determining recoverability of biotopes, how resistance or sensitivity was accounted for in the assessment. There is also missing context around specific species within these biotopes which have longer lifespans, and recruitment can take longer than 2 years.</p> <p>For example, in the resilience assessment of MC5212 <i>Abra prismatica</i>, <i>Bathyporeia elegans</i> and polychaetes in circalittoral fine sand, it states that <i>"Recovery of the seabed from severe physical disturbances that alter sediment character may also take up to 10 years or longer (Le Bot et al., 2010), although extraction of gravel may result in more permanent changes and this will delay recovery"</i>.</p> <p>The pressures list has missed 'Physical change (of the seabed type)' which is a significant pressure from installation of offshore wind. For example for biotope <a href="#">Nephtys cirrosa and Bathyporeia spp. in infralittoral sand - MarLIN - The Marine Life Information Network</a>, the resistance to a permanent change to an artificial</p> | <p>Natural England advises that further context should be added to the Section 2.3.2 text and the Table in Appendix 1 to include the approach taken to summarise the MarESA assessment of the 6 biotopes as the term recovery is used which differs to the three parameters in MarESA.</p> <p>Caveats on the recovery timelines should be included as MarESA states that the resilience and ability to recover is a combination of environmental conditions, frequency of disturbance and intensity of the disturbance, therefore the recovery assessment should include this as a caveat to the recovery timeframes presented. This section does not provide all relevant information related to the recovery of biotopes present in the area, therefore, there could be misinterpretation of the MarESA outputs based on the recovery timelines in this report. This section should note that recovery is only possible after the activity has finished, therefore actual recovery, from placement of infrastructure and hard substrata to the sandbank is between 62-70 years based on the evidence the Applicant has provided.</p> | <p>The Applicants acknowledge this comment and have updated the table with additional text from MarESA and a commentary on how this has been applied to the assessment.</p> <p>This is provided in <b>Review of evidence on recovery of sandbank habitat following habitat damage (Revision 2)</b> [document reference 10.36] submitted at Deadline 3.</p> <p>The point on frequency is noted, but the Applicants highlight that for the vast majority of locations across the array there will only be a single disturbance event during construction. In the case of cables for example, once the cable is installed physical recovery will commence at that location. There is no need for repeat disturbance at that location unless remedial work is required, either during construction or for the operational lifetime.</p> <p>Likewise for turbines whilst the initial disturbance footprint is large (especially if seabed preparation is required) subsequent construction disturbance is limited to the jack-up / anchoring footprint in the worst case (if dynamic positioning for installation vessels is possible this would not impact the seabed).</p> <p>It is not realistic to consider disturbance as continuous across the entirety if the Offshore Development Area as any disturbance will actually be highly localised, episodic and short term and the majority of the Array Areas will not be disturbed post-construction.</p> |

| NE Ref Section | Section                | Key Concern and/or Update                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Natural England's Advice to Resolve Issue                                                                                                                                                                                                                                                                                                  | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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|                |                        | <p>substrata is none, with low resilience and high sensitivity.</p> <p>Other pressures (i.e. abrasion/disturbance of the substrate on the surface of the seabed, and pressure and/or disturbance of the substrate below the surface of the seabed including abrasion) have also not been included in this assessment.</p>                                                                                                                                                                                                                | <p>Additionally, the Advice on Operations for Dogger Bank SAC published in 2022 states that the habitats in Dogger Bank SAC are all sensitive to the pressure of physical change to another seabed type, and physical change to another sediment type. Table A-1 should therefore also include 'Physical change (of the seabed type)'.</p> | <p>The <b>Review of evidence on recovery of sandbank habitat following habitat damage</b> [AS-025] relates to disturbance not permanent loss. This effect is assessed in the EIA and HRA (<b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085 and <b>Report to Inform Appropriate Assessment (RIAA) Habitats Regulations Assessment (HRA) Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish</b> [APP-046 updated in AS-051] and conceded as the source of the conclusion of Adverse Effects on Integrity (AEoI) on Dogger Bank SAC. It is not relevant to include this impact in the document.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3              | Section 4 Paragraph 44 | <p>Natural England disagree with the conclusion of no AEoI in relation to habitat disturbance/damage. Dogger Bank SAC is unique in the UK, provides a substantial proportion of sandbank to achieve sufficiency requirements and is in unfavourable condition. Any activity which occurs over a duration of 60 years then, based on the information in Table A-1 will take at least 2-10 years to recovery, can be considered to significantly impact the conservation objectives of the site and prevent this site from recovering.</p> | <p>Natural England advises that unless the Applicant position changes during Examination this risk and issue is unlikely to be resolved during examination.</p>                                                                                                                                                                            | <p>The Projects lifetime is 30 years (32 if sequential build) with construction 5 – 7 years.</p> <p>Although construction would take up to 7 years, activities will be localised, episodic and short term. It is not the case that disturbance will occur over the entire footprint of the Offshore Development Area continually for that entire period. Once construction at a location is completed there will be minimal further disturbance at that location and recovery will commence (see response to (2) above).</p> <p>In the case of turbines, operation and maintenance activities may involve jacking up and this has been considered within the worst case (see Table 6-3, <b>RIAA HRA Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)</b> [AS-051]). This would involve a small area of disturbance at the turbine. It is assumed that around 20 jack-up operations could occur at the Projects annually.</p> <p>In the case of cables, allowance has been made for cable repairs. However, it should be noted that unless reactive repairs, replacements or remedial cable reburial work is required any operations and maintenance activity will be remote. Therefore, there is no reason for further disturbance for the majority of the cables within the SAC.</p> <p>The text added to Table A-1 of <b>Review of evidence on recovery of sandbank habitat following habitat damage (Revision 2)</b> [document reference 10.36] is taken directly from the MarESA assessments. The Applicants highlight that in the majority of cases 'full recovery' is assumed within two years – whilst individual components of each biotope may take longer than that to recover MarESA Guidance (Tyler-Walters <i>et al</i>, 2023) states:</p> <p><i>'Full recovery is defined as the return to the state of the habitat that existed prior to impact. This does not necessarily mean that every component species has returned to its prior condition, abundance or extent but that the relevant functional components are present and the habitat is structurally and functionally recognisable as the initial habitat of interest. It should be noted that the recovery rates are only indicative of the recovery potential.'</i></p> <p>The Applicants consider that Natural England is placing a higher bar on recovery than is presented by MarESA which was developed in conjunction with the Statutory Nature Conservation Bodies (SNCBs) including Natural England.</p> |

| NE Ref Section | Section                      | Key Concern and/or Update                                                                                                                                                                                                                                                                                                                                                                                                      | Natural England's Advice to Resolve Issue                                                                                                                                                                                                                          | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| 4              | Section 5, Paragraph 46 & 47 | <p>Natural England notes that the report does not mention any potential increased disturbance / impact from cumulative impacts during construction (or UXO clearance) or continued cumulative disturbance from the operational phase.</p> <p>There may be shorter recovery rates for specific biotopes known to be present within Dogger Bank SAC, but the full recovery of the whole site would be expected to be longer.</p> | Natural England advises that cumulative impacts should be given further consideration by the Applicant.                                                                                                                                                            | <p>Natural England references to frequency of disturbance do not reflect the reality of construction and operation. Impacts will be localised, episodic and short term during construction, they will not occur across the entire array for the duration of construction. Recovery at one location can commence once construction activities have moved on. During operation disturbance of the seabed will be limited to cases where reactive repairs, replacements or remedial work is required. Assumptions for operational phases footprints are assessed in the EIA and HRA (<b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085 and <b>RIAA HRA Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish</b> [APP-046 updated in AS-051]).</p> <p>In terms of UXO clearance this would be subject to a separate Marine Licence (ML) application. Appendix B - Dogger Bank B UXO crater survey results of <b>Review of evidence on recovery of sandbank habitat following habitat damage</b> [AS-025] provides the results from several high-order clearances. These show a maximum crater diameter of around 5m. – therefore a crater would be around 20m<sup>2</sup> and 100 such clearances would equate to 2,000m<sup>2</sup>. This equates to approximately 0.007% of the assessed total area of disturbance from construction from the Projects within the SAC. As noted in section 5.5.7.4.3 of <b>Chapter 5 Project Description (Revision 3)</b> [REP1-009] however, it is expected that 41 UXO would need to be cleared during the construction phase across the entirety of the Offshore Development Area. As such the potential area of UXO clearances within the Dogger Bank SAC is likely to be even lower than that estimated above. The Applicants do not consider that this represents a material consideration for the assessment given the estimation already required for in-combination projects in relation to disturbance.</p> <p>It is unclear what Natural England mean by site in 'the full recovery of the whole site'. The Applicants assume that Natural England are referring to the Offshore Development Area not the whole of the Dogger Bank SAC.</p> <p>If this relates to the Offshore Development Area, the Applicants reiterate the MarESA Guidance (Tyler-Walters <i>et al</i>, 2023) which states:</p> <p><i>Full recovery is defined as the return to the state of the habitat that existed prior to impact. This does not necessarily mean that every component species has returned to its prior condition, abundance or extent but that the relevant functional components are present and the habitat is structurally and functionally recognisable as the initial habitat of interest. It should be noted that the recovery rates are only indicative of the recovery potential.</i></p> <p>The Applicants consider that Natural England is placing a higher bar on recovery than is presented by MarESA which was developed in conjunction with the SNCBs (including Natural England).</p> |
| 5              | Section 5, Paragraph 50      | Natural England notes that the report states that habitat damage in the Dogger Bank SAC is no different from that of the North Norfolk Sandbanks and Saturn Reef SAC, or the Haisborough, Hammond and Winterton SAC. We disagree with this statement,                                                                                                                                                                          | Natural England advises that we are currently at an impasse in relation to the issue. We believe that to resolve this issue evidence from cable installation within Dogger Bank SAC and subsequent recovery would need to be submitted. Until this is provided, we | The Applicants consider that Natural England advice stems from a focus on the underlying structure of Dogger Bank – which differentiates this SAC from 'mobile/dynamic sandbank systems' of other SACs – rather than the ecology of the biotopes themselves. The habitat H1110 for which the Dogger Bank is designated pertains to the 'living' section of the sand – which for most species at Dogger Bank is the surface to around 30cm depth. It is these                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| NE Ref Section | Section | Key Concern and/or Update                                                                                                                                                                                                                                                                                                                                                                   | Natural England's Advice to Resolve Issue                                                                     | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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|                |         | <p>as while the impact footprints and impact types may be similar, Dogger Bank SAC is a relict sandbank and comparison to the recovery rates to mobile/dynamic sandbank system is not appropriate in this instance.</p> <p>While it has been evidenced that UXO craters have backfilled, this is not sufficient evidence to state that all aspects of habitat damage may be reversible.</p> | <p>agree with the conclusion of the Plan Level HRA on habitat disturbance/damage from cable installation.</p> | <p>surface sediments that are dynamic as demonstrated by a) the sediment types present (sand and mixed sediments) and b) the fauna present (typically having low numbers of individuals, low species diversity and biomass and dominated by small, short-lived rapidly reproducing mobile species that can recolonise areas quickly following disturbance from wave and tidal action).</p> <p>The MarESA sensitivity assessments upon which the Applicants have based their assessment are clear on the recoverability of these biotopes (see additional text added to Table A-1 in <b>Review of evidence on recovery of sandbank habitat following habitat damage (Revision 2)</b> [document reference 10.36] submitted at Deadline 3.</p> <p>We also highlight that Natural England's references to frequency of disturbance do not reflect the reality of construction and operation. Impacts will be localised, episodic and short term during construction, they will not occur across the entirety of the Array Areas for the duration of construction. Recovery at one location can commence once construction activities have moved on. During operation disturbance of the seabed will be limited to cases where reactive repairs, replacements or remedial work is required. Assumptions for operational phases footprints are assessed in the EIA and HRA (<b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085 and <b>RIAA HRA Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish</b> [APP-046 updated in AS-051]).</p> <p>The Applicants concur that there is unlikely to be agreement with Natural England on this issue. However, in response to the comments provided in [REP2-065] the Applicants have updated Table A-1 of <b>Review of evidence on recovery of sandbank habitat following habitat damage (Revision 2)</b> [document reference 10.36] and submitted at Deadline 3. This provides, via direct quotes from MarESA assessments, the rationale for the conclusions reached by the Applicants.</p> <p>The Applicants highlight that should agreement not be reached, the worst case for disturbance effects has been provided in the <b>RIAA HRA Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)</b> [AS-051] which will be updated at Deadline 4 to incorporate the latest worst case estimates for disturbance for the Projects.</p> <p>The Applicants consider that it is crucial that decisions where AEoI is concluded are robust. In this case, if AEoI is concluded for disturbance it will increase the quantum of compensation 15-fold (relative to the permanent habitat loss) and increase the area requiring designation. This decision will also affect any other projects included within Defra's strategic workstream where disturbance is a potential issue. This has serious implications not only for the Applicants (and other wind farm developers) who will be liable for costs through the Marine Recovery Fund (MRF) but also affect other industries and third parties which currently utilise the location selected for designation and will be subject to that site's conservation objectives and management measures. Unlike ornithological compensation, where over-compensation due to precaution only affects the Applicants, over-precaution in this case could affect numerous third parties.</p> |

## 2.4.4 Marine Mammals

Table 2-11 The Applicants' Response to Natural England's Advice on Marine Mammals [REP2-067]

| I.D.       | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| REP2-067:0 | <p>In formulating these comments, the following documents submitted by the Applicant have been considered in relation to the impacts of Dogger Bank South (East and West) Offshore Wind Farm (DBS) on Marine Mammals.</p> <ul style="list-style-type: none"> <li>[AS-048] 10.30 - Response to Natural England's Relevant Representations (Revision 01)</li> <li>[AS-103] EN010125-000901-8.26 Draft In Principle Site Integrity Plan (Revision 2) (Tracked)</li> <li>[AS-101] EN010125-000899-8.25 Outline Marine Mammal Mitigation Protocol (Revision 2) (Tracked)</li> <li>[AS-121] EN010125-000920-3.1 Draft Development Consent Order (Rev 03) (Tracked)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No response is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| REP2-067:1 | <p><b>Defra Marine Noise Package</b></p> <p><u>Natural England's Risk &amp; Issues Log Deadline 2, point F6, F7, F8, F11, F16 &amp; F22.</u></p> <p>As per Natural England's submission to Deadline 1 [REP1-063], Defra have recently published their Marine Noise package, which provides a suite of new and updated policy and guidance relating to the reduction and mitigation of underwater sound. This package includes the following documents:</p> <ul style="list-style-type: none"> <li>Marine Noise Policy paper, which can be found here - <a href="#">Reducing marine noise - GOV.UK</a>.</li> <li>An updated Unexploded Ordnance (UXO) Joint Position Statement, which can be found here - <a href="#">Marine environment: unexploded ordnance clearance Joint Position Statement - GOV.UK</a></li> <li>UXO clearance supporting guidance providing more detail for <a href="#">Supporting minimising environmental impacts from unexploded ordnance clearance - GOV.UK</a></li> </ul> <p>Alongside these documents, JNCC have also published new mitigation guidelines for UXO clearance, which can be found here - <a href="#">JNCC guidelines for minimising the risk of injury to marine mammals from unexploded ordnance (UXO) clearance in the marine environment   JNCC Resource Hub</a>, and a joint statement from science and nature conservation advisors (Cefas, JNCC and NE) on the use of noise reduction methods when piling, which can be found here - <a href="#">JNCC, Natural England and Cefas position on the use of quieter piling methods and noise abatement systems when installing offshore wind turbine foundations   JNCC Resource Hub</a>. The statement is supported by a Cefas evidence review of noise reduction methods, which can be viewed here - <a href="#">Evidence on the efficacy of underwater noise abatement</a>.</p> <p>Together, these documents set out the expectation that from January 2025., <i>'all offshore wind pile driving activity across all English waters will be required to demonstrate that they have utilised best endeavours to deliver noise reductions through the use of primary and/or secondary noise reduction methods in the first instance'</i> and that low-order UXO clearance should now be the default clearance method, with high-order detonations restricted to extraordinary circumstances. They also provide updated advice regarding mitigation of UXO clearance activities. Natural England advises that the Applicant should</p> | <p>The Applicants acknowledge the policy and guidance published on the 21<sup>st</sup> January 2025. The Applicants have reviewed these documents and appropriate measures and references to the policy and guidance have been added to the <b>Outline Marine Mammal Mitigation Protocol (MMMP) (Revision 3)</b> [REP2-047] and the <b>In Principle Site Integrity Plan (SIP) for the Southern North Sea (SNS) Special Area of Conservation (SAC) (Revision 3)</b> [REP2-049] which were submitted at Deadline 2.</p> |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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|              | review the content of these documents and ensure their assessment and mitigation measures are aligned. Natural England will provide further, more detailed advice in due course as required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| REP2-067:2.1 | <p><b>Outline Marine Mammal Mitigation Protocol (MMMP) [AS-101]</b></p> <p><u>Passive Acoustic Monitoring (PAM)</u></p> <p><u>Natural England's Risk &amp; Issues Log Deadline 2, point F10.</u></p> <p>In Section 3.1.3 to 3.1.7 of the Outline MMMP (Tracked) the Applicant has updated the document regarding the use of Passive Acoustic Monitoring (PAM). Natural England can only agree to piling during reduced visibility / darkness if the Applicant can demonstrate that the PAM equipment covers the whole Mitigation Zone (MZ). The most frequently used PAM technologies for marine mammal mitigation struggle to detect harbour porpoise beyond a distance of 300 m. Natural England advises the Applicant to provide evidence to demonstrate their proposed PAM equipment and methodology will effectively monitor the whole mitigation zone for all marine mammals, and that they have considered animals that vocalise infrequently such as baleen whales and seals. If this is not possible, the MMMP should be updated to include commencing / re-starting piling during times of good visibility only.</p>                                                                                                                                                              | In Paragraph 110, of the <b>Outline MMMP (Revision 3)</b> [REP2-047] it states that " <i>the PAM equipment would be appropriate to detect vocalising cetaceans in the monitoring area (MA)</i> ". Details on the PAM equipment to be used will be confirmed post consent and consulted on as part of the final MMMP. Other options such as night vision binoculars and infrared cameras will also be considered if required. All approved mitigation measures and piling protocols will be presented in the final MMMP and approved by the MMO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| REP2-067:2.2 | <p><u>Hammer Energy</u></p> <p>Whilst Natural England welcomes the Applicant updating the Development Consent Order (Rev 03) [AS-121] to include the Maximum Hammer Energy, we advise that within Section 3.1.5 of the Outline MMMP [AS-101] it should be clearly stated what the Applicant's intentions are regarding the commencing hammer energy in addition to the percentage of the maximum hammer energy this represents.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | In section 3.1.5; paragraph 129, of the <b>Outline MMMP (Revision 3)</b> [REP2-047] it states that " <i>the soft-start starting hammer energy would be the lowest possible starting hammer energy</i> " and in paragraph 132, " <i>it is proposed that each piling event would commence with a minimum of 10 minutes at reduced hammer energy, for example 10% of the maximum hammer energy, followed by a gradual ramp-up for at least 20 minutes for all pile driving activities</i> ". The initial starting hammer energy and % of the maximum hammer energy this represents will be confirmed post consent with the final project design and included in the final MMMP.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| REP2-067:3.1 | <p><b>Draft In Principle Site Integrity Plan (SIP) [AS-103]</b></p> <p><u>Natural England's Risk &amp; Issues Log Deadline 2, point F17.</u></p> <p><u>Noise Abatement Systems</u></p> <p>In addition to the Applicant updating all assessment and mitigation measures in line with Defra's Marine Noise Package, Natural England strongly advises the Applicant to commit to the use of noise reduction technology, for example NAS, in the Draft In Principle SIP before the close of Examination. The current commitment to include NAS in the final version of the SIP post-consent, if necessary, will only be submitted 6 months prior to the start of construction. This may not be in sufficient time to procure the technology, which we do not consider would satisfy the requirement for best endeavours and could risk delays in piling.</p> <p>Further, the in-combination assessment is still resulting in significant breaches of both the daily and seasonal disturbance thresholds for the Southern North Sea (SNS) SAC. We advise the noise reduction committed to should be sufficient to demonstrate that the Applicant has contributed to reducing the disturbed area of the SNS SAC. An updated in-combination assessment should be provided to demonstrate this.</p> | <p>In line with this policy, the <b>In Principle Site Integrity Plan (SIP) for the Southern North Sea (SNS) Special Area of Conservation (SAC) (Revision 3)</b> [REP2-049] was updated at Deadline 2 to state that the Projects will utilise best endeavours to deliver noise reductions, where applicable, through the use of primary and/or secondary noise reduction based on the final project design. Noise reduction systems, such as Noise Abatement System (NAS), are being included within the Projects' procurement strategy as an optional element to allow it to be called upon should it be required based on the final design parameters. Hence, procurement related issues should not represent a barrier to the use of a noise reduction system should it be required.</p> <p>Updated Project effects and reductions from any primary and / or secondary mitigation measures will be presented for the Projects alone, and in-combination assessments, in the final SIP for the SNS SAC post consent when the final design is confirmed and appropriate information for other projects is available.</p> |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| REP2-067:3.2 | <p><u>Scheduling of UXO Clearance with other Projects</u></p> <p>Natural England welcomes the Applicant's Scheduling of UXO clearance with other projects (Section 9.6 of Draft In Principle SIP) as a useful tool for minimising the area of disturbance on a particular day; however, this method should be in addition to noise reducing technology as outlined in Defra's recently published Marine Noise Package. Natural England will provide further comment following the Applicant's review of the Defra Noise Package documents and updated assessment and mitigation measures.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>The Applicants are committed to using low order techniques as the default clearance method, which is in line with the guidance within the Department for Farming and Rural Affairs (Defra) Marine Noise Package, if clearance is required. The MMO requested (see RR-030: 4.16.3 in Table 4.6.1 of <b>The Applicants Responses to Relevant Representations</b> [PDA-013]) that the Applicants include section 9.6 Scheduling of UXO clearance in revision 2 of the In Principle SIP for the SNS SAC which was submitted in November 2024.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| REP2-067:3.3 | <p><u>Clustering of UXO Devices</u></p> <p>Natural England is open to discuss novel methods to reduce the disturbance area for UXO clearance; however, these will be assessed on a case-by-case basis and with consideration to potential impacts to the marine environment. Natural England advises the Applicant to follow the UXO clearance guidance in the Defra Marine Noise Package, which sets out that low-order UXO clearance should now be the default clearance method, with high-order detonations restricted to extraordinary circumstances.</p> <p>We also highlight that benthic impacts will be a key consideration in UXO clearance campaigns for these projects, and clustering UXOs to minimise noise disturbance could result in greater benthic impacts. Existing OWF projects located within the Dogger Bank SAC have employed a hierarchy of mitigation for UXO clearance focussing on relocation to avoid, or prior to clearance, where safe to do so. Within the Dogger Bank SAC, we advise a similar approach to that of Dogger Bank A, which includes UXOs being relocated to areas with a surface sandy layer &gt;5m. Supporting information should be provided in the Marine Licence Application including characteristic stratigraphic profiling of soil provinces across the array areas from geotechnical surveys, to confirm where this will be possible. This led to confirmed UXO (cUXO) relocations being undertaken as part of the investigative licence.</p> <p>In the event that relocation of cUXO is not possible, Natural England have advised other projects that if high order is required in-situ and a crater is formed exposing glacial sediments, we would consider there to be adverse effect on integrity (AEol) for Dogger Bank SAC. This would not necessarily prevent a license being granted or the works from taking place due to the overriding health and safety risks of the UXOs staying in place, however it would require monitoring of craters and recovery and possible remedial action.</p> | <p>The MMO requested that the Applicants include section 9.6 Clustering of UXO Devices in revision 2 of the In Principle SIP for the SNS SAC which was submitted in November 2024 (see RR-030: 4.16.3 in Table 4.6.1 of <b>The Applicants Responses to Relevant Representations</b> [PDA-013]). The Applicants are committed to using Low Order techniques as the default clearance method and welcomes further discussion on appropriate methods to reduce the disturbance area for UXO clearance during a separate Marine Licence application post consent.</p> <p>Appendix B - Dogger Bank B UXO crater survey results of <b>Review of evidence on recovery of sandbank habitat following habitat damage</b> [AS-025] provides the results from several high-order clearances. These show a maximum crater depth of 0.8m (in 1.5m sand depth, typically sand layers at clearance locations were much deeper). It is expected that given these depths it is unlikely that glacial sediments will be exposed as the thickness of the upper sand units reaches 9.5m as proven by boreholes, but can exceed 10m.</p> |
| REP2-067:4   | <p><b>Interim Population Consequences of Disturbance (iPCoD) Modelling</b></p> <p><u>Natural England's Risk &amp; Issues Log Deadline 2, point F13 &amp; F14.</u></p> <p>iPCoD modelling is a tool to support conclusions in the Impact Assessment. Owing to evidence gaps in the relationship between marine mammal ecology, sound, disturbance and population impacts, this modelling makes many assumptions, and caution should always be taken when interpreting the outputs of any model.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>Please see the Applicants' response (RR-039:F1) to why the significance of effect was based on the iPCoD in <b>The Applicants' Comments to Relevant Representations</b> [PDA-013]. The Effective Deterrent Ranges (EDRs) for harbour porpoise are likely to be overestimated, as findings from Ocean Winds Moray West OWF found evidence of a 10km EDR from monopiles with a 10m diameter and with no noise mitigation (Benhemma-Le Gall <i>et al.</i> 2024<sup>20</sup>) but the assessment with the 26 km EDR has been presented. For the cumulative assessment for potential disturbance of harbour porpoise, an EDR of 26km was used for other OWF projects unless results from the dose response curve was the worst case as it was for the Projects. The dose response curve for harbour porpoise for pile driving Graham <i>et al.</i></p>                                                                                                                                                                                                                                                                |

<sup>20</sup> Benhemma-Le Gall, A., Hastie, G.D., Brown, A.M., Booth, C.G., Graham, I.M., Fernandez-Betelu, O., Iorio-Merlo, V., Bashford, R., Swanson, H., Cheney, B.J., Abad Oliva, N. & Thompson, P.M. (2024). Harbour porpoise responses to the installation of XXL monopiles without noise abatement; implications for noise management in the Southern North Sea. PrePARED Report, No. 004. August 2024

| I.D. | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                    | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|      | <p>Natural England therefore reiterates that although the model can be used as a tool alongside other methods for assessing the impacts of disturbance, it does not mean the results of the modelling can be viewed in isolation or should solely dictate the final significance conclusion. We also maintain our previous advice regarding EDR, to use 26km for unabated monopile installation and 15km for pin piles and abated piling.</p> | <p>(2017<sup>21</sup>) predicts an almost 100% response at received levels of 160 dB re 1 <math>\mu\text{Pa}^2\text{s}</math> SELss, ~70% response at 150 dB re 1 <math>\mu\text{Pa}^2\text{s}</math> SELss and only ~50% response at 145 dB re 1 <math>\mu\text{Pa}^2\text{s}</math> SELss. Therefore, the assumption that 100% of the animals are disturbed is likely to be highly over-precautionary (Sinclair <i>et al.</i> 2023<sup>22</sup>). There is no dose response curve for grey seal, in sections 11.6.1.2.2.2 and 11.6.1.2.3.2 in <b>Chapter 11 Marine Mammals</b> [APP-095], the dose response curve for harbour seal (Whyte <i>et al.</i> 2020<sup>23</sup>) was applied to grey seal. This approach has its limitations given the different hearing ranges and sensitivities between the species and can result in overestimates of disturbance which result in an over precautionary approach.</p> <p>Therefore, the Applicants maintain that population modelling is the best tool to understand the cumulative disturbance as it considers the consequences of disturbance and hearing damage in the long term, incorporating the worst case numbers for permanent threshold shift (PTS) and disturbance. If the significance of effect is solely based on EDRs or dose response curve, this highlights the short-term disturbance only, assuming 100% of animals will respond and can be over precautionary. Therefore creating a snapshot of the impact and not considering any long-term effects, or animals returning to the area after piling. Studies such as Benhemma-Le Gall <i>et al.</i> (2024) and others presented in section 11.6.1.2.1 of <b>Chapter 11 Marine Mammals</b> [APP-095] found that harbour porpoises and other marine mammals return to the area soon after the end of piling.</p> <p><b>A Marine Mammal Technical note: Significance of Effect for disturbance from piling and cumulative underwater noise</b> [document reference 13.6] has been submitted at Deadline 3 showing the magnitude and significance of effect for marine mammals from all methods presented in section 11.6.1.2 of <b>Chapter 11 Marine Mammals</b> [APP-095] to assess for any potential disturbance from piling at the Projects. The significance of effect will be presented from the cumulative assessment of disturbance from piling and from noisy activities to consider other methods of calculating disturbance alongside the results from the iPCoD.</p> |

<sup>21</sup> Graham, I. M., A. Farcas, N. D. Merchant, and P. Thompson. 2017a. Beatrice Offshore Wind Farm: An interim estimate of the probability of porpoise displacement at different unweighted single-pulse sound exposure levels. Prepared by the University of Aberdeen for Beatrice Offshore Windfarm Ltd.

<sup>22</sup> Sinclair, R.R.; Kazer, S.; Ryder, M.; New, P. & Verfuss, U.K. (2023). Review and recommendations on assessment of noise disturbance for marine mammals. NRW Evidence Report No. 529, 143pp, Natural Resources Wales, Bangor

<sup>23</sup> Whyte, K.F., Russell, D.J.F., Sparling, C.E., Binnerts, B. and Hastie, G.D. (2020). Estimating the effects of pile driving sounds on seals: Pitfalls and possibilities. The Journal of the Acoustical Society of America, 147(6), 3948–3958.  
<https://doi.org/10.1121/10.0001408>

## 2.4.5 Risk and Issues Log

Table 2-12 The Applicants' Response to Natural England's Risk and Issues Log [REP2-069]

| I.D.        | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| REP2-069:B1 | <p>Initial Written Representation - <i>For indentations on the seabed due to installation vessels, the Maximum Design Scenario (MDS) for anchoring for either DBS E or W in isolation is 244,640m<sup>2</sup>, however, the maximum total impacted area by anchoring is stated as 22,061m<sup>2</sup>. It is unclear which of these values is the MDS for seabed area affected by anchoring. This is also the case for the DBS E and DBS W concurrent/sequential scenario MDS. Clarification on the MDS for all construction scenarios is required. (7.8: Table 8-1)</i></p> <p>Deadline 1 Status - <i>Issue progressed. We agree with the clarification provided by the Applicant and advise that Table 8-1 of [APP-080] is updated to resolve this issue.</i></p> <p>No change - no new information relevant to this issue has been submitted at this deadline.</p> | <p>The Applicants maintain their position regarding the updating of the <b>Environmental Statement (ES) and Report to Inform Appropriate Assessment (RIAA)</b> as stated in the response to item REP1-063:3 in <b>The Applicants' Responses to Deadline 1 Documents</b> [REP2-058] and repeated below:</p> <p><i>The Applicants note this previous comment regarding the updating of the ES and RIAA is now outdated, with updates having been provided on a case-by-case basis where there were multiple material changes to be made (e.g. <b>RIAA HRA - Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish</b> [APP-046] was superseded by <b>RIAA HRA - Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish (Revision 2)</b> [AS-051], <b>RIAA HRA- Part 4 of 4 – Marine Ornithological Features</b> [APP-048] superseded by <b>RIAA HRA- Part 4 of 4 – Marine Ornithological Features (Revision 3)</b> [AS-085]). However, the Applicants do not consider that it is appropriate to be updating documents in line with every comment and representation generally throughout examination.</i></p> <p><i>There are many parts of the ES that are not relevant to NE or their competencies, but which would need to be updated for consistency if it were general practice to update assessments as NE requests. In general, this is not an efficient use of time and does not add value to the examination process. In addition, the actual footprints of effect, noise impacts, mortalities etc will relate to the final detailed design not the Rochdale Envelope consented by Secretary of State, so in the longer term any updates to the ES would also be superseded when final designs are known. Again, we note that this is not normal practice, would not add significant value to the delivery of the Projects and is not proportionate.</i></p> <p><i>We would question NE's assertion that the ES is used extensively post-consent for the simple reason that it is the Secretary of State's decisions (including HRA) DCO and ML and certified documents which are the basis of consent compliance, not the EIA, RIAA as presented at Application. The DCO, DMLs and certified documents will refer to the parameters permitted, and the Application will need to demonstrate how detailed design fits within these – it should not be necessary (given that the parameters are consented) for NE to re-examine how these relate to the Maximum Design Parameters and WorstCase Scenarios assessed in the EIA/RIAA where the design envelope remains at, or below that presented within the Rochdale Envelope.</i></p> <p><i>The Applicants have updated Schedule 19 of the <b>Draft DCO (Revision 5)</b> [REP1-004] to ensure that the definition of "environmental statement" incorporates the changes to the Projects made by Project Change Requests 1 and 2. At the request of the ExA, the Applicants are also considering the structure of Schedule 19 with a view to making it as clear as possible where any aspects of the ES have been updated since submission of the DCO application.</i></p> |
| REP2-069:B3 | <p><i>The rationale behind remedial cable protection along 10% of the cable route within Dogger Bank SAC should be provided, with evidence provided to justify a realistic Worst Case Scenario (WCS). Specific locations (informed by acoustic data) of areas requiring cable protection should be identified, including identification of affected features/sensitive habitats. (7.8)</i></p> <p>No change. See Appendix C2.1 and C2.2 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                                            | <p>See the Applicants' response to this matter in ISH2.4.4 in <b>The Applicants' Responses to Issue Specific Hearing 2 (ISH2) Supplementary Agenda Questions</b> [REP1-050], repeated below for convenience.</p> <p><i>The DBS Array Area Cable Burial Risk Assessment (CBRA) remains at a Preliminary stage, from a study completed in 2023. The Applicants are not planning to develop a revised version until the turbines proposed for use by the Projects have been chosen (likely Q3 2025 and, therefore, post-Examination) and the array layout is finalised (similar time frame). The Applicants conducted geotechnical site investigations in the Array Area at DBS West in 2024, and will be commencing geotechnical studies at DBS East in 2025. Using information arising from these surveys updates of the array area ground models will enable a refined CBRA to be developed in late 2025 – again, post-close of the DBS DCO Examination.</i></p> <p><i>The indications are that the Array Areas (the most significant part of the Projects for construction in the Special Area of Conservation (SAC)) shouldn't present areas of burial challenge. The site boundaries brought forward for Examination</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| I.D.        | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>were refined from the Agreement for Lease boundaries presented at the PEIR stage in part to exclude high density boulder regions which would have presented significant burial risk. Despite the removal of this area of potentially challenging ground conditions, an upper limit of 10% of remedial protection (excluding cable / pipeline crossings and approaches to wind turbine and platform foundations where cables entering J-tubes need to be protected) has been assessed on the basis of the level of uncertainty that currently exists prior to geotechnical survey outputs being available and prior to a specific array cable layout being developed.</p> <p>The Applicants are not a participant in Dogger Bank A and B and do not have evidence in relation to those projects. We understand that construction is on-going on these projects and final cable protection values would not be available until construction has finished. In any case, the Applicants also do not consider that using the 'actual' (verified after installation is complete) remedial burial protection quantities from another project would be appropriate or applicable for the DBS Projects as there is a need to allow for the inherent uncertainty that exists until site design and investigations are complete, burial depths and methodology are selected, and ultimately until the physical process of laying/burying the cables is complete. If the Applicants were to lay cables on the seabed surface without an agreed option for remedial burial protection, the cables would be subject to high risk of damage during the potentially lengthy period of time it would take to seek approval for secondary cable protection to be installed. Further, there would be additional seabed disturbance then associated with any cable repair works which would be likely to occur with greater frequency over more extensive areas should remedial cable protection usage be sub-optimal from an asset protection perspective.</p> <p>The final volumes, areas and locations of remedial cable protection will not exceed the worst case values presented in the <b>Draft DCO (Revision 5)</b> [document reference: 3.1]. The predicted final volumes, areas and locations of anticipated remedial cable protection will be included in the final Cable Statement(s) which will require MMO approval under each dML prior to the commencement of construction. The final Cable Statement(s) will be produced in alignment with <b>Cable Statement (Revision 2)</b> [AS-078]. Conditions within each dML (e.g. Condition 23 in Schedule 10) require the Applicants to report to the MMO and the relevant statutory nature conservation bodies the details of the cable protection and scour protection used within the authorised scheme following the completion of construction. Thus, it is clear that there will be a high level of control of the deployment of remedial cable protection prior to and beyond construction.</p> <p>The Applicants wish to clarify that the primary means of cable protection is burial and that every effort will be taken to maximise burial potential reduce the use of costly, time-consuming remedial protection measures through appropriate cable design, routeing and micro-siting and the selection of the most appropriate installation methods. Aside any environmental concerns, the Applicants are deeply incentivised to minimise the use of remedial protection at all project stages.</p> |
| REP2-069:B4 | <p>The WCS for remedial cable protection assumes 20% of the export cable route will require remedial protection outside of Dogger Bank SAC. A realistic worst-case scenario on the locations for cable protection should be identified (informed by geophysical and geotechnical data). We also advise that the rationale (including supporting evidence) for this requirement should be provided. (7.8)</p> <p>No change. See Appendix C2.1 and C2.2 of Natural England's Deadline 2 submission for further detail.</p> | <p>The Applicants have developed a worst case scenario for cable protection along the Offshore Export Cable Corridor that is informed, in part, by available geophysical and geotechnical information combined with their knowledge and experience of developing, constructing and operating offshore wind farms. The Applicants are of the opinion that the information presented on a Rochdale Envelope basis for consenting purposes represents a reasonable worst case based on their knowledge of the site and of experience of delivering other offshore wind farm projects.</p> <p>As noted for the derivation of a percentage value for cable protection along the cable routes in the array areas (see the response to REP2-069:B3 above), the Applicants have undertaken a CBRA for the Export Cable Corridor. The latest version of this CBRA is Appended to <b>Cable Statement (Revision 3)</b> [REP2-039]. The CBRA will be further updated as the DBS Projects mature and the worst case scenario for cable protection will be refined and presented as a final figure (along with a final CBRA) within the Final Cable Statements which will be submitted for MMO approval and their advisors comments prior to the commencement of construction. The Applicants maintain that the worst case scenario presented is a reasonable estimate which aligns with the maturity of the Projects and is based, in part,</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| I.D.        | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | on available site information combined with their knowledge and experience of developing, constructing and operating offshore wind farms.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| REP2-069:B5 | <p><i>For the Operational impact "Cable Repairs and Reburial", the activity has been described, but no associated LSE pathways have been included. The Applicant should specify the LSEs and provide the MDS for each activity during operation (for all build scenarios). The WCS impact on each MPA and affected features should also be provided for direct and indirect effects. (7.8: Table 8-1)</i></p> <p>No change. Whilst an updated Outline offshore Operations and Maintenance Plan [AS-028] has been provided, this has not addressed this issue.</p>                                                                     | <p>With regards to this specific point, the Applicants note the response provided under RR-039:B13 of remains valid: 'Column One of Operational impact 6 should read 'Changes in suspended sediment concentration, transport and seabed level due to cable repairs and reburial'. This additional text should also be applied to wherever 'Cable repairs and reburial' appears in <b>Chapter 8 Marine Physical Environment</b> [APP-080] (e.g. heading of section 8.7.4.6).'</p> <p>As noted in Table 8-1 of <b>Chapter 8 Marine Physical Environment</b> [APP-080], an estimated footprint of disturbance has been provided for each build-out scenario for the Projects. As it is not known at this stage of the Projects the exact locations and lengths of cables that may require repairing or reburial, the figures stated in Table 8-1 were based on the assumption that up to 25% of installed cable protection measures may require replenishment over the Projects lifetime. This figure is considered to be highly precautionary, with the real-world area of changes in suspended sediment concentration, transport and seabed level due to cable repairs and reburial likely to be much lower than this. As the original cable protection measures would be repaired or replaced, there would be no changes to the total seabed footprint of cable protection measures over that assessed in <b>Chapter 8 Marine Physical Environment</b> [APP-080].</p> <p>See the Applicants' response to REP2-069: B1 regarding the updating of the ES and RIAA above.</p>                                                                             |
| REP2-069:B7 | <p><i>We advise that a commitment is made and secured in the DCO to remove all on and above seabed infrastructure associated with the development within benthic designated sites (excluding cable crossings). Without this, the WCS should assess the impacts of leaving assets permanently in situ rather than restricting to the operational lifetime. (7.8)</i></p> <p>No change - See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                           | See the Applicants' response to this matter in <b>Table 2-7</b> , REP2-065:7.1 above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| REP2-069:B8 | <p><i>The Preliminary CBRA is based on the Projects' Red Line Boundary (RLB) at PEIR stage, which has been significantly revised. We advise that a more up-to-date and detailed pre-consent cable burial assessment should be provided, based on the most recent RLB and turbine/cable layout. This should use project specific geotechnical data and/or data from constructed offshore windfarms to consider the likelihood of burial success to inform realistic MDS parameters for cable protection requirements. (8.20)</i></p> <p>No change - no new information relevant to this issue has been submitted at this deadline.</p> | <p>It should be noted that an updated CBRA for the Offshore Export Cables was issued within the updated <b>Cable Statement (Revision 3)</b> [REP2-039], issued at Deadline 2. This update includes only the Offshore Development Area being brought forward for consent, amongst a host of other updates.</p> <p>The CBRAs produced to date include geophysical and geotechnical information where available, in line with best practice.</p> <p>The Applicants would like to reiterate that the final versions of the CBRAs will not be completed within the time frame of examination. There will also be no further updates to any existing CBRAs within the time frame of examination. This is because there is no new information or data available to the Applicants that can provide any further understanding than has already been documented. The Applicants are in the process of planning additional surveys for summer 2025. When the results become available, they will feed into an Array Area CBRA which will be produced post consent.</p> <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: B18 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below:</p> <p><i>The supplied CBRA (Cable Statement [APP-244]) for the export cables is a preliminary CBRA which includes the consideration of several potential cable corridors. The development of the CBRA is an iterative process and may require further, multiple updates as designs develop and when a Contractor is selected and the burial methodology is finalised.</i></p> |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <i>The DMLs included in the <b>Draft DCO</b> [APP-027] require detailed cable risk assessments to be included as part of the construction method statement to be submitted and approved prior to commencement of the licensed activities, or any phase of those activities.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| REP2-069:B9  | <p><i>We advise that identification of regional scale sediment transport pathways is an important part of the baseline characterisation. Sediment transport pathways have been identified only for the landfall, adjacent coastline, nearshore and westernmost section of the Offshore Export Cable Corridor (OECC). We advise the Applicant to establish or infer sediment transport pathways for the remainder of the OECC and array areas. (7.8.1)</i></p> <p>No change. We continue to advise that the Applicant should seek to establish a baseline characterisation of the sediment transport pathways that may be affected by the presence of the DBS projects.</p>                                                                           | <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: B19 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below:</p> <p><i>A search of available evidence regarding regional sediment transport pathways along the Offshore Export Cable Corridor reveals no relevant information is available. Research into regional pathways is restricted to areas south of the Offshore Export Cable Corridor (e.g. Kenyon &amp; Cooper, 2005<sup>24</sup>; the Southern North Sea Sediment Transport Study<sup>25</sup>; DTI Strategic Environmental Assessment<sup>26</sup>). Details of seabed mobility specific to the Offshore Export Cable Corridor are presented in detail in Section 8.5.8 of <b>Chapter 8 Marine Physical Environment</b> [APP-080] which is a more useful baseline for impact assessment than regional information.</i></p> <p>The Applicants cannot provide more information on the identification of regional sediment transport pathways other than that referenced above. The spatial limitations to our baseline assessment are driven by the availability of published literature and information, and also the location of marine bedforms that are used to understand sediment transport pathways. There are no regional scale marine bedforms in 'the remainder of the OECC and array area' to provide information on sediment transport pathways in these areas. Therefore, we rely on the tidal current directions to infer sediment transport direction which is defined in section 8.5.5. of <b>Chapter 8 Marine Physical Environment</b> [APP-080]. If Natural England are aware of any other data sources in addition to those referenced in this response, the Applicants can consider these and provide a further update on this item later in the examination process. To this end, we await the provision of any further information or advice from Natural England.</p> |
| REP2-069:B13 | <p><i>The ES identifies a significant secondary wave shadow component from the south to south-south-west (S-SSW) where the spatial extent, and potential impacts have not been assessed. The Applicant should provide details of the spatial extent of any wave shadow effects extending from DBS into Dogger Bank A. The implications of these wave shadow effects for the marine physical environment over the lifetime of the Projects should also be considered. (7.8)</i></p> <p>No change. We continue to advise that it would be useful if the Applicant could provide the revised model output for waves approaching south to south-south-west (S-SSW). This will help inform understanding of the potential for in-combination effects.</p> | <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: B24 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below:</p> <p><i>The Applicants agree that a wave shadow could also form to the north of the arrays for waves approaching from the south and south-southwest. It is likely that waves that approach the Projects from the south would also approach Dogger Bank A and B from the south at the same time. Hence, the wave shadows for all the wind farms would be to the north, with no potential for overlap and generation of cumulative effects.</i></p> <p><i>Also, the changes in significant wave height induced by the Projects wind turbines are predicted to be so small at less than 1.5% of baseline conditions, that cumulative changes to wave regime with Dogger Bank A and B will not be significant (see section 8.8.4 of <b>Chapter 8 Marine Physical Environment</b> [APP-080] for further details).</i></p> <p>The Applicants presented the wave modelling methodology, including wave directions, during the Marine Physical Processes ETG held on 11<sup>th</sup> September 2023 to provide an opportunity for Natural England to feedback and advise through the Evidence Plan Process. The response to the meeting minutes (found in <b>Appendix F - Non-Statutory Consultation and Engagement</b> [APP-043]) did not include any advice to consider waves approaching from south to south-south-west.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| REP2-069:B14 | <i>The potential impacts of extending North Turnpikes Road to the beach/cliffs are unclear. We advise that further details are provided on the emergency intertidal access design including</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | See the Applicants' response to this matter in <b>Table 2-6</b> , REP2-064:1 above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

<sup>24</sup> Kenyon, N.H., Cooper, W. (2005). Sandbanks, sand transport and offshore wind farms. Department of Trade and Industry. Kenyon MarineGeo and ABP Marine Environmental Research Ltd, UK.

<sup>25</sup> Sutherland, J., Brew, D. & Williams, A. (2002). Southern North Sea Longshore Sediment Transport.

<sup>26</sup> Cefas (2016). Suspended Sediment Climatologies around the UK, Strategic Environmental Assessment Programme. UK Department for Business, Energy and Industrial Strategy offshore energy

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|              | <p><i>coastal morphology and sensitive habitats that may be affected by its presence. Any environmental impacts associated with its construction, operation, and subsequent removal should be fully considered and assessed. (7.5)</i></p> <p>No change - See Appendix B2 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| REP2-069:B17 | <p><i>Removal or modification of sandwaves within the OECC and array areas could adversely affect nearby sandbanks, seabed topography, and affect flow and sediment transport patterns. All efforts should be made to avoid areas of sandwaves and/or minimise the need for sandwave levelling/pre-sweeping by micro-routing. If possible, dredged material should be placed to aid natural infilling of trenches. Best practice should be followed to assess and minimise potential impacts to sandwave/sandbank systems. The proposed pre- and post-construction monitoring should be used to assess geomorphological recovery after cable installation. (7.5, 7.8)</i></p> <p>No change - See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                         | <p>See the Applicants' response to this matter in <b>Table 2-7</b>, REP2-065:3.2 - REP2-065:3.6 above.</p> <p>The Applicants note commitment Co8g in the <b>Commitments Register (Revision 2)</b> [REP2-025] which states:</p> <p><i>Route selection and micro-siting of the cables will be used to avoid areas of seabed that pose a significant challenge to their installation where practiceable, including for example areas of sand waves and megaripples. This will minimise the requirement for seabed preparation (levelling) and the associated seabed disturbance.</i></p> <p>This commitment is secured in the <b>Cable Statement (Revision 3)</b> [REP2-039].</p> <p>In addition, the Applicants have committed to depositing like sediment on like sediment within the boundary of the Dogger Bank SAC, thus ensuring, as Natural England have requested, that sediment both remains within the system and sandbank recovery is enabled.</p> <p>The final routing of the Projects array, Inter-Platform and Offshore Export Cables will be informed by the final CBRA, which will form part of the final Cable Statement. The final Cable Statement, as secured under Conditions 15 (1)(c) of DMLs 1 and 2, Conditions 13 (1)(c) of DMLs 3 and 4 and Condition 11 (1)(c) of DML 5, will be required to be submitted to and approved by the MMO prior to any licensed activities for the Projects being undertaken.</p> <p>In addition, the Applicants have committed to undertaking post-construction monitoring activities to determine the recovery of sandwaves / sandbank habitat, as detailed in Table 1-2 of the <b>In Principle Monitoring Plan (Revision 2)</b> [REP2-043].</p> |
| REP2-069:B18 | <p><i>Model results show 'wave shadows' with potential reductions in significant wave height of up to 0.7m, with the largest effects due to the offshore platforms in the Array Areas. The implications of the predicted changes to wave climate/height over the lifespan of the Projects need to be fully considered in terms of impacts to the seabed sediment composition, sediment mobility, and seabed morphology of the Dogger Bank SAC. (7.8)</i></p> <p>No change. Whilst we will be providing our full comments on the Change Request at Deadline 3, we note that the maximum significant wave height reduction values do not appear to have changed in the revised Marine Physical Processes Modelling Technical Report (Rev 02) [AS-136]. We seek clarification from the Applicant on whether the wave modelling has been revised in line with the changes to the Project Design Envelope.</p> | <p>The Applicants can confirm that the wave modelling was revised in line with the updates to the Projects design presented in <b>Project Change Request 1 – Offshore and Intertidal Works</b> [AS-141], and direct Natural England to <b>Appendix 8-3 – Marine Physical Processes Modelling Technical Report (Revision 2) (Tracked)</b> [AS-136] which details the changes made to the wave modelling in tracked changes.</p> <p>Regarding the point on 'wave shadows', the Applicants maintain their position as detailed in RR-039: B24 of the <b>Response to Natural England's Relevant Representations (including Appendices A - F, and I)</b> [AS-048], repeated below:</p> <p><i>The Applicants agree that a wave shadow could also form to the north of the arrays for waves approaching from the south and south-southwest. It is likely that waves that approach the Projects from the south would also approach Dogger Bank A and B from the south at the same time. Hence, the wave shadows for all the wind farms would be to the north, with no potential for overlap and generation of cumulative effects.</i></p> <p><i>Also, the changes in significant wave height induced by the Projects wind turbines are predicted to be so small at less than 1.5% of baseline conditions, that cumulative changes to wave regime with Dogger Bank A and B will not be significant (see section 8.8.4 of <b>Chapter 8 Marine Physical Environment</b> [APP-080] for further details).</i></p>                                                                                                                                                                                                  |
| REP2-069:B19 | <p><i>Hydrodynamic model results show lower current speeds (shadow effects) along the western boundary of the Arrays, but also increased current speeds inside the Arrays. Similarly, there are shadow areas in the difference plots for bed shear stress with areas of reduced bed shear stress adjacent to the western DBS W Array boundary and to the west and east of the DBS E Array</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: B30 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and <b>The Applicants Response to Written Representations</b> [REP2-057] which are reiterated below:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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|      | <p><i>boundary, but with areas of increased bed shear stress within the Arrays. The implications of predicted changes to current speeds and bed shear stress over the lifespan of the Projects need to be fully considered in terms of seabed sediment composition, sediment mobility, and seabed morphology of the Dogger Bank SAC. (7.8)</i></p> <p>No change. We continue to advise that the Applicant needs to consider how the predicted changes (reductions and increases) in tidal current speeds and bed shear stress will affect patterns of erosion and deposition and seabed morphology within and adjacent to the arrays over the 30 year project lifespan. Furthermore, consideration should be given to changes in seabed heterogeneity over the lifespan of the project.</p> | <p>Section 8.7.4.4 in <b>Chapter 8 Marine Physical Environment</b> [APP-080] provided an assessment of potential changes to bedload sediment transport and seabed morphology based on the results of the tidal current/bed shear stress modelling presented in <b>Appendix 8-3 Marine Physical Processes Modelling Technical Report</b> [APP-084]. Changes to the tidal regime are likely to be the main driver of any changes in bedload sediment transport and as a result, seabed morphology. The conclusions were that the near-field magnitude of impact on bedload sediment transport regime and seabed morphology would be low and the far-field magnitude of impact would be negligible. The predicted zone of influence for the Array Areas on bedload sediment transport regime and seabed morphology includes Dogger Bank. The section concluded that significance of the effect on Dogger Bank would be negligible.</p> <p>'Changes to the sediment composition and distribution of the Dogger Bank Special Area of Conservation (SAC) Annex I sandbank feature would be driven by changes to marine physical processes (tidal currents and waves), which control sediment transport. Project and site specific marine physical processes modelling has been undertaken, see <b>Appendix 8-3 Marine Physical Processes Modelling Technical Report</b> [APP-084].</p> <p>The results predict a maximum change in current speeds due to the array structures of +/-0.01m/s to +/-0.02m/s. This is approximately 2-6% of the baseline speeds. The maximum changes to wave height are predicted to be between 0.04m and 0.06m. These are less than 1.5% of baseline wave heights. Given these results, tidal currents are the dominant driver of bedload sediment transport across the array areas, and hence changes in tidal current velocities (bed shear stress) induced by the infrastructure could potentially change sediment transport. The bed shear stress model outputs predict that (in general) the infrastructure would induce a reduction in sediment transport rates across the south of the array areas with a predicted increase across the north of the array areas. However, these changes to bed shear stress would not lead to significant changes to sediment composition and distribution because the changes in bed shear stress are less than 3% of the baseline bed shear stress and would then remain constant during the operational lifespan. Change of this magnitude would have no significant long-term effects on the mobilisation and sediment transport characteristics of the seabed sediments across the Dogger Bank SAC Annex I sandbank feature.'</p> <p>The Applicants provided further information in response to REP1-074:2.3.4 in <b>The Applicants Response to Written Representations</b> [REP2-057], as outlined below;</p> <p>Detailed review of the model outputs for bed shear stress show that most changes are localised within 1km of the individual turbines and both an increase and decrease in bed shear stress occurs which at a local scale offsets one another leading to no net change in sediment transport.</p> <p>At a more regional scale, there is a weak relationship between the morphology of the Dogger Bank and the changes in bed shear stress. Along the bank margins where the water deepens, there is an increase in bed shear stress due to the Projects which could theoretically mobilise coarser grains leading to erosion. However, the maximum modelled change in bed shear stress is 0.02Nm<sup>2</sup> which would not significantly change the grain size of sediment that could be mobilised. For example, the threshold to mobilise fine sand is 0.157Nm<sup>2</sup> and the threshold to mobilise medium sand is 0.195Nm<sup>2</sup>. The difference in bed shear stress required to mobilise these two grain size fractions is 0.04Nm<sup>2</sup>. Therefore, a maximum change in bed shear stress of 0.02Nm<sup>2</sup> would not significantly change the potential for sediment to be transported having limited to no effect on sediment transport pathways. Once the Projects have been constructed, the change in tidal regime will be the same for the duration of the operation phase. Therefore, there will be no additional changes to bed shear stress over the lifespan of the Projects that could manifest in changes to sediment transport pathways. As a worst case, if long term changes did occur that led to erosion along the Dogger Bank margins resulting in a reduction in sediment supply to the northwest (as residual sediment transport is from the southeast to northwest), there would be no wider impacts as there are no morphological receptors or other projects located to the northwest of the Array Areas.</p> |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| REP2-069:B21 | <p><i>Dogger Bank SAC should be included as a receptor in the Marine Physical Environment EIA. It should also be identified (along with other relevant designated sites) on Marine Physical Environment maps to inform understanding of potential impacts. (7.8)</i></p> <p>No change. We advise that whilst marine physical processes receptors are primarily morphological or water column features, designated sites may also be affected by physical changes to their integrity and special features thus it is appropriate to identify them as receptors and to be included in the marine physical processes impact assessment.</p>                                                                                                                                                                                                                                                            | <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: B32 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below:</p> <p><i>The principal receptors with respect to the marine physical environment are coastal or marine features with an inherent geological or geomorphological value or function which may be affected by the Projects. As the conservation objectives of SACs and Marine Conservation Zones (MCZs) are driven by their ecological functioning, they are not considered as receptors for the marine physical environment and are assessed in the relevant chapters. However, a designated site may have a morphological component. For example, the Dogger Bank SAC comprises part of the Dogger Bank which is a topographic high and a geomorphological feature. Therefore, Dogger Bank itself is included as a receptor in this assessment, but not the Dogger Bank SAC. Potential effects on the Dogger Bank SAC are detailed in <b>RIAA HRA Part 2 of 4</b> [APP-046].</i></p> <p>It should also be noted that the Dogger Bank SAC was previously included as a receptor in the Projects Preliminary Environmental Information Report (PEIR), but was amended following feedback received from Natural England regarding the consideration of SACs in the Benthic Ecology and Physical Processes ETG held on 29<sup>th</sup> January 2024 (see <b>Consultation Report Appendix F - Non-Statutory Consultation and Engagement</b> [APP-043] for further context).</p> |
| REP2-069:B23 | <p><i>We cannot rule out an adverse effect on integrity for the Humber Estuary SAC due to the current condition allowing 10% of the cumulative export cable length to be protected from 350m seaward of MLWS to the 10m depth contour. We advise that alternative methods of cable burial and/or protection should be explored in line with the mitigation hierarchy, to remove or reduce the need for cable protection between MLWS and the 10m contour. If cable protection is not removed from the project envelope, the commitment and associated DCO condition should be refined to only placing cable protection within -9 and -10m below LAT, as the Applicant has already identified this as being the area potentially requiring cable protection. See also C13. (6.1, 7.5, 7.8)</i></p> <p>No change - See Appendix B2 of Natural England's Deadline 2 submission for further detail.</p> | <p>See the Applicants' response to this matter in <b>Table 2-6</b>, REP2-064:2 above.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| REP2-069:B24 | <p><i>We advise that the Applicant should commit to the removal of all structures on and above the seabed and consider the potential decommissioning of any proposed external cable/scour protection (including evidence on the likelihood of its success and impacts). We advise that the Applicant should consider and assess the long-term impacts to the marine physical environment of any assets left in situ for the lifetime of the assets within a pre-construction outline Decommissioning plan. (7.8)</i></p> <p>No Change - See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                        | <p>See the Applicants' response to this matter in <b>Table 2-7</b>, REP2-065:7.1 above.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| REP2-069:B25 | <p><i>We advise that the value of both Dogger Bank and Smithic Bank is high. This should be taken into consideration by the Applicant and their assessment updated where necessary. (7.8)</i></p> <p>No change. We welcome the Applicants' acknowledgement [AS-048] that the value of both Dogger Bank and Smithic Bank are higher than low. However, our advice remains unchanged.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: B38 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below</p> <p><i>With regards to the marine physical environment, the Applicants acknowledge that following the definition of value in Table 8-10 of <b>Chapter 8 Marine Physical Environment</b> [APP-080], Dogger Bank and Smithic Bank are now assigned medium as the receptors are not designated, but of local / regional importance. The original values assigned as low in <b>Chapter 8 Marine Physical Environment</b> [APP-080] are therefore changed to medium. To assign high values in terms of the marine physical environment, the feature would need to be designated. This change in value would not alter the</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>original assessment conclusions reached in <b>Chapter 8 Marine Physical Environment</b> [APP-080], with regards to Smithic Bank and Dogger Bank.</p> <p>The Applicants acknowledge the value of the Dogger Bank SAC is high in relation to its ecological function as outlined in <b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085]. However, the Dogger Bank SAC is not designated for its geological or geomorphological function and therefore cannot be assigned a value of high in relation to the assessment of marine physical processes. To ensure the assessment is robust and consistent, value must be considered following the criteria defined in Table 8-10 of <b>Chapter 8 Marine Physical Environment</b> [APP-080]. Therefore, Smithic Bank also cannot be assigned a high value unless it is designated.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| REP2-069:B26 | <p><i>Supporting evidence for seabed recovery from installation vessels has been provided based on pre-installation (2010) and post-removal surveys (2022) for two Met Masts in DBB and C OWFs (i.e. after a period of 12 years). There is insufficient information behind the conclusion that the duration, reversibility and, thus, magnitude of impact on seabed morphology will be low. Consequently, we are unable to agree with the assessment conclusion that effect significance will be negligible. The Applicant should provide further evidence for seabed recovery following installation vessel impacts. Additional mitigation should be explored to minimise impacts to the seabed morphology at Dogger Bank and the SAC during construction and Operation and Maintenance activities. (8.8)</i></p> <p>No change. As stated by the Applicants [AS-048], persistent installation vessel impacts may occur on Dogger Bank where no (or little) mobile sediment overlies static geological formations. We therefore advise that the assessment of recoverability, value and sensitivity for Dogger Bank should be updated to reflect this. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p> | <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: B39 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below:</p> <p><i>Each wind turbine installation could potentially generate about 6,600m<sup>2</sup> of indentations. Where these indentations are created in areas of mobile sediment, they are likely to be infilled through natural sediment transport processes. This is the most likely scenario given the shallow geology of the array areas, where sediment (sand) deposited in the modern marine environment has been proven in boreholes to reach thicknesses of up to 9.5m.</i></p> <p><i>However, there is a possibility that some of the indentations would be formed in areas of seabed that contain no (or little) mobile sediment, where static geological formations (e.g. the underlying Dogger Bank Formation) are exposed at the seabed or are close to seabed under a veneer of sediment. In these cases, the indentations are likely to remain unchanged over the longer-term, which would change the seabed topography in relatively small, isolated areas across the Array Areas. However, the substrate that will be exposed within the indentations will have the same geological composition as the surrounding seabed. So, in terms of qualifying habitat (seabed / substrate type), they would remain unchanged.</i></p> <p><i>As such, section 8.7.3.10 of <b>Chapter 8 Marine Physical Environment</b> [APP-080] determined that there would be no likely significant effects (in EIA terms) in relation to Indentations on the Seabed Due to Installation Vessels.</i></p> <p>There are no monitoring data from the Dogger Bank for jack-up operations. However, monitoring from Moray East (Moray Offshore Wind Farm (East) Limited, 2024<sup>27</sup>) considered depressions from construction vessels, in this case the deepest penetrating jack up (11.2m) had infilled at a rate of almost 4m per year. Considering the hydrodynamic and geological conditions are comparable between Moray East and Dogger Bank, this supports the interpretation that the impact on seabed morphology from indentations caused by jack up platforms will be low as they will likely recover in the short terms (&lt;5years). Please see the Applicants response to the first item in <b>Table 2-7</b> above for further information on this topic.</p> |
| REP2-069:B27 | <p><i>The sensitivity of Dogger Bank (and Dogger Bank SAC) to changes in seabed level from certain construction activities has been assessed as negligible. We advise that these construction activities and similar O&amp;M activities are likely to result in changes to the extent and distribution and physical structure of the site's sandbank feature, which will further hinder its restore objective(s). Further mitigation measures should be adopted and secured to minimise impacts. Pre and post-construction monitoring should be committed to to validate predictions of seabed elevation change and extent of deposition, sediment composition and distribution change, and seabed recovery across the Array Areas and Inter-Platform Corridor within Dogger Bank SAC.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: B40 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below:</p> <p><i>The anticipated maximum depth of seabed preparation will be 0.5m, which is within the natural range of elevation change that is currently being experienced across Dogger Bank. Also, route selection and micro-siting will be used to avoid areas of seabed that pose a significant challenge to installation. This will minimise the requirement for seabed preparation and the associated seabed disturbance.</i></p> <p><i>Where seabed preparation is required, the seabed will be disturbed (up to 0.5m in depth). The coarser sediment (sand) that is disturbed would fall rapidly and the resulting change would be a low protrusion above the existing seabed that is local to the release point. The deposited sediment would be like the sediment on the seabed that it has replaced and the</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

<sup>27</sup> [https://marine.gov.scot/sites/default/files/mwe-ow-op-rep-0002\\_moray\\_east\\_benthic\\_monitoring\\_report.pdf](https://marine.gov.scot/sites/default/files/mwe-ow-op-rep-0002_moray_east_benthic_monitoring_report.pdf)

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|              | <p><i>Should impacts be found to be greater than predicted then the necessary recourse should be taken. (8.7.3.6)</i></p> <p>No Change - See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p><i>surrounding seabed. Over time, tidal currents would remobilise and transport this sediment as bedload, and the distribution and physical structure of the area would return to baseline conditions.</i></p> <p><i>Any fine sediment released into the water column could potentially settle. The overall change in elevation of the seabed due to deposition of sediment from the plume for foundations was modelled (see <b>Appendix 8-3 Marine Physical Processes Modelling Technical Report</b> [APP-084]). The results show the maximum change in seabed level was less than 5mm. This sediment would be continually resuspended on each tide and eventually widely dispersed, to reduce the thickness to a point where it will be effectively zero.</i></p> <p><i>As such, the Applicants do not believe that any migration further to that detailed in section 8.3.3 of <b>Chapter 8 Marine Physical Environment</b> [APP-080] is required with regards to construction related changes to marine physical processes across Dogger Bank (and Dogger Bank SAC).</i></p> <p><i>In addition, as noted in REP2-069 C28a commitment Cog1 of the <b>Commitments Register (Revision 2)</b> [REP2-025] (and secured in the <b>Draft DCO (Revision 6)</b> [document reference: 3.1]) commits the Projects to micro-site around surficial deposits of glacial till, should they be identified during pre-construction surveys.</i></p> <p><i>The Applicants have committed to depositing like sediment on like sediment within the boundary of the Dogger Bank SAC, thus ensuring, as Natural England have requested, that sediment both remains within the system and sandbank recovery is enabled. In addition, the Applicants have committed to undertaking post-construction monitoring activities to determine the recovery of sandwaves / sandbank habitat, as detailed in Table 1-2 of the <b>In Principle Monitoring Plan (Revision 2)</b> [REP2-043].</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| REP2-069:B28 | <p><i>There is insufficient information regarding the location and significance of cable crossings and nearshore cable protection measures relative to Smithic Bank to support the assessment conclusions. The potential exchange of sediment between South Smithic and the Holderness Coast should be considered when assessing impacts to the nearshore and circulatory sediment transport processes due to the presence of nearby cable protection measures and cable crossings. (7.8)</i></p> <p>No change. We continue to advise that more detailed information is needed regarding the proposed cable crossing with the Hornsea Four export cable corridor, and its proximity, to Smithic Bank, in order to better understand potential impacts on nearshore sediment transport processes.</p> | <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: B42 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below:</p> <p><i>The sediment transport processes controlling the development and evolution of Smithic Bank are landscape-scale, both spatially and temporally. Bathymetry evidence suggests that since 1979 there have been large-scale changes to the morphology of the bank over wide areas, including areas that will be occupied by the proposed Offshore Export Cable Corridor. These changes constitute a significant movement of large volumes of sand, which will continue. The volume of sand transport that will be interrupted by any cable protection near Smithic Bank will be extremely small (orders of magnitude less) in comparison to the much larger volume being transported due to natural physical and sedimentary processes. Hence, the continued high-volume movement of sand within and around Smithic Bank will not be significantly affected by the relatively small volumes of sand that may be intercepted by the cable protection. See <b>Figure 8-2 - Location and Indicative sediment transport pathways across Smithic Bank derived from bedform geometry</b> (in <b>Chapter 8 - Marine Physical Environment Figure 8-1 to Figure 8-13</b> [APP-081]) which presents the Offshore Export Cable Corridor in relation to the Smithic Bank (as delimited by the Joint Nature Conservation Committee (JNCC)).</i></p> <p><i>There will also be no potential for effect on bedload sediment transport at cable protection at cable crossing points. This is because the locations of the crossings are outside and seaward of the boundary of Smithic Bank on a coarse seabed in deeper water and not subject to processes driving the bank evolution. The nearest crossing is with the Hornsea Project Four cable corridor to the east of the bank. The positions of the cable crossings are outside the sediment transport pathway controlling the form and function of Smithic Bank or any sediment exchange with the coast.</i></p> <p>Regarding the proposed cable crossing with the Hornsea Four export cable corridor, as detailed in Table 5-17 of <b>Chapter 5 Project Description (Revision 3)</b> [REP1-009] the maximum estimated parameters for Offshore Export Cable crossings are as follows:</p> <ul style="list-style-type: none"> <li>Maximum estimated width per crossing – 15.2m</li> </ul> |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>Maximum estimated length per crossing – 400m</li> <li>Maximum estimated height per crossing – 1.4m</li> </ul> <p>As the exact routing of the Hornsea Project Four offshore export cables will not be known until that project enters its detailed design phase, it is not yet known where exactly the Projects Offshore Export Cables would cross the Hornsea Project Four offshore export cable. As such, the Applicants are unable to provide any more detailed information regarding the Hornsea Project Four offshore export cable crossing at this time. To help indicate where any crossings may take place, the Applicants have provided Figure D-1 in <b>Appendix D</b> which details the location where the Hornsea Project Four export cable route and the Projects Offshore Export Cable Corridor overlap, and hence where any crossings may occur.</p>                                                                                                                                         |
| REP2-069:B29 | <p><i>There is insufficient information to support the assessment of changes to bedload sediment transport and seabed morphology due to the presence of cable protection measures on Dogger Bank. We advise that, firstly, the Applicant should attempt cable burial across Dogger Bank to avoid placement of cable protection measures within Dogger Bank SAC. Secondly, a seabed mobility assessment should be carried out to inform the cable burial assessment and, thus, the requirement for cable protection measures. Lastly, if cable protection measures are found to be necessary, potential changes to seabed sediment transport processes and seabed morphology should be fully assessed for the WCS option for cable protection measures on Dogger Bank. (7.8)</i></p> <p>No change - See Appendix B2 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                   | <p>See the Applicants' response to this matter in <b>Table 2-6</b>, REP2-064:3 above.</p> <p>The Applicants note that first principle of cable protection is for cables to be buried. The final CBRA for the Projects will be written to maximise cable burial wherever the seabed conditions allow. Installation of any additional cable protection measures represents a risk mitigation measure, with the Applicants committing to minimising the use of external cable protection measures in commitment C092 of the <b>Commitments Register (Revision 2)</b> [REP2-025], as secured in the <b>Cable Statement (Revision 3)</b> [REP2-039]</p> <p>The <b>Bed Mobility &amp; Thermal Environment</b> [document reference: 13.7], previously used to inform <b>Chapter 8 - Marine Physical Environment</b> [APP-080] and referenced in that chapter, has been submitted at Deadline 3 to provide further evidence of the work the Applicants have undertaken to characterise the baseline environment within the Offshore Development Area.</p> |
| REP2-069:B30 | <p><i>It is suggested that the magnitude of decommissioning effects on the marine physical environment would be comparable to those during the construction phase. However, the baseline conditions at the end of design life may differ significantly from those at pre-construction and the value of receptors may change over the lifetime of the project. Consequently, the EIA cannot confidently determine decommissioning impacts at the end of the design life of the Projects. A number of alternatives to decommissioning are emerging, and whilst these alternatives may be beyond the scope of the present ES, we advise that the EIA is updated as such alternatives progress. The Applicant should provide a pre-consent outline decommissioning plan which considers the potential long-term impacts to the marine physical environment and processes of any assets left in situ. (7.5, 7.8)</i></p> <p>No change - See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p> | <p>See the Applicants' response to this matter in <b>Table 2-7</b>, REP2-065:7.1 and REP2-065:7.2 above.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| REP2-069:B33 | <p><i>Dogger Bank D OWF has not been included in the in-combination assessment for impacts to the Humber Estuary SAC - we advise this is included. (6.1)</i></p> <p>No change - We continue to advise Dogger Bank D OWF is included in the in-combination assessment for impacts to the Humber Estuary SAC.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: B48 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below</p> <p><i>The Scoping Report for Dogger Bank D<sup>28</sup>, publicly released following the submission of the Projects' Draft DCO [APP-027] application in June 2024, does not state the potential location or indicative proportions of any cable protection measures to be used within that projects offshore export cable corridor. As such, there is insufficient information available at this time to include Dogger Bank D in the Projects cumulative assessment on the Humber Estuary SAC.</i></p>                                                                                                                                                                                                                                                                                                                             |

<sup>28</sup> Dogger Bank D Scoping Report

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| REP2-069:B34 | <p><i>Our concerns raised for the overall EIA in relation to impacts from cable installation and operation are all also relevant within the MCZ assessment. The MCZ Stage 1 impact assessment should be updated based on the comments provided on the impact assessment. (8.17)</i></p> <p>No change - Please see our comments on the Benthic Technical note [AS-104] included within Deadline 2 Appendix C2.1.</p>                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>See the Applicants' response to regarding nearshore cable protection in REP2-064:2 to REP2-064:3 in <b>Table 2-6</b> above, and the disposal of sediment in relation the offshore export cable corridor in REP2-065:3.1 to REP2-065:3.6 in <b>Table 2-7</b> above.</p> <p>In line with these responses, the Applicants do not believe that any further updates are required to be made for the <b>Stage 1 MCZA</b> [APP-240] and that the conclusions of this report remain valid.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| REP2-069:B35 | <p><i>An EIA matrix has been used to determine magnitude rather than considering if there is an impact pathway to the MCZ features and utilising conservation objectives, conservation advice and advice on operations. This section of the MCZ assessment should be updated in line with Stage 1 MCZ Assessments undertaken for other OWF projects. Until this is updated, we are unable to agree with the conclusions of this assessment. (8.17)</i></p> <p>No change - Please see our comments on the Benthic Technical note [AS-104] included within Deadline 2 Appendix C2.1.</p>                                                                                                                                                                                                                                                  | <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: B48 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below:</p> <p><i>The methodology detailed in section 3.2.1 Assessment of Risk to Conservation Objectives within the <b>Stage 1 Marine Conservation Zone Assessment</b> [APP-240] follows the industry standard approach to assessing the risk of hindering the conservation objectives of any affected MCZs. It should be noted that the approach to defining magnitude detailed in this section matches that detailed in the Sheringham and Dudgeon Extension Projects example noted in this response.</i></p> <p><i>The Natural England Advice on Operations documents for the Holderness Offshore and Holderness Inshore MCZs were used to inform the assessment, with appropriate references included to these documents within the <b>Stage 1 Marine Conservation Zone Assessment</b> [APP-240].</i></p> <p>Reviewing Natural England's <b>Benthic Ecology Technical Note</b> [AS-104], it is unclear how these comments relate to this matter regarding the MCZA methodology. Could Natural England please provide further context for how, in their view, the methodology in the <b>Stage 1 Marine Conservation Zone Assessment (MCZA)</b> [APP-240] does not follow the approach of other offshore wind farm projects, when (as stated in the Applicants' previous response on the matter), the <b>Stage 1 MCZA</b> [APP-240] follows the same methodology as that of the consented Sheringham and Dudgeon Extension projects MCZA<sup>29</sup>.</p> |
| REP2-069:B36 | <p><i>The impacts assessment does not consider sandwave levelling along the export cable corridor. We advise against deposition of sand in locations where SSC and deposition become significantly elevated above baseline level and suggest this is secured in the commitments register. (8.17)</i></p> <p>No change. The Applicant [AS-025] considers that as the offshore ECC doesn't overlap the MCZs, no direct effects will occur as a result of sandwave levelling. The Applicant has highlighted that increased SSC in the ECC from activities involved in seabed preparation for cable installation have been considered. We continue to advise against deposition of sand in locations where SSC and deposition become significantly elevated above baseline level, and that this is secured in the commitments register.</p> | <p>The Applicants maintain their position on this matter that no direct effects on the Holderness Inshore MCZ or Holderness Offshore MCZ will occur as a result of sandwave levelling.</p> <p>With regards to the potential commitment proposed, the Applicants note that as described in <b>Chapter 8 - Marine Physical Environment</b> [APP-080], the only location where SSC and deposition may become significantly elevated above the baseline level is in the direct vicinity of any offshore cable trenches created for the Projects. Is this the area Natural England wish for no direct deposition of seabed material collected during seabed preparation activities to occur within?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| REP2-069:B37 | <p><i>The mitigation measures to minimise scour protection do not provide certainty that impacts will be minimised to acceptable levels. Pre-construction surveys do not relate to either the MCZ or mitigation measures unless surveys cover the secondary impacts zone within the MCZ, and remedial actions are taken should impacts be greater than predicted. Further consideration is required of mitigation measures that will reduce impacts to the MCZ. (8.17)</i></p> <p>No change - we maintain our previous advice that commitments to not anchoring or using jack up vessels in the MCZ aren't necessarily mitigating for scour protection impacts and</p>                                                                                                                                                                  | <p>It is assumed that Natural England are referring to cable protection in this comment, and not to scour protection as is written, as scour protection would be deployed only within the Array Areas – many tens of kilometres away from any MCZs. Assuming that this is a correct interpretation of Natural England's representations, please see the Applicants' response regarding nearshore cable protection and potential impacts on sediment transport in REP2-064:2 above.</p> <p>In summary, the Applicants maintain their position that the potential installation of localised cable protection measures from 350m of MLWS up to the 10m depth contour, that would protrude 50cm above the seabed and would in all likelihood extend no more than 200 m in length on an aggregated basis, would have no effect in terms of sediment supply to the Spurn Head geological feature (a protected feature of the Holderness Inshore MCZ) which is</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

<sup>29</sup> Stage 1 Cromer Shoal Chalk Beds Marine Conservation Zone Assessment

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                        | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|              | continue to advise that further consideration is required of mitigation measures that will reduce impacts to the MCZ.                                                                                                                                                                                                                                                                                                                                             | located 40km away from the landfall, especially considering the extremely high volumes of sediment delivered to the Holderness coast through cliff erosion, given it is the fastest eroding coast in the UK. Please refer to the response to REP2-064:2 for further information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| REP2-069:B38 | <p><i>We are concerned that temporary deterioration in condition is to be disregarded if the habitat is sufficiently healthy and resilient to enable recovery. Further evidence is required to demonstrate that impacts will be temporary, and recovery can occur in the short term. (8.17)</i></p> <p>No Change - we maintain our previous advice.</p>                                                                                                           | The Applicants maintain the position that the existing <b>Stage 1 MCZA</b> [APP-240] and <b>Benthic Ecology Technical Note</b> [AS-104] provide sufficient evidence (based on publicly available data and project-specific physical processes modelling) to support the conclusion that the conservation objectives of the Holderness Inshore MCZ and Holderness Offshore MCZ will not be hindered by the Projects. Should Natural England have any further information or evidence they believe should be considered regarding this matter, the Applicants request this to be shared for consideration later in the examination process.                                                                                                                                                                                                                                                                                                                             |
| REP2-069:B39 | <p><i>Dogger Bank D OWF has not been included in the in-combination assessment for impacts to Spurn Point - we advise this is included. (8.17)</i></p> <p>No change - We continue to advise Dogger Bank D OWF is included in the in-combination assessment for impacts to Spurn Point.</p>                                                                                                                                                                        | <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: B58 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below:</p> <p><i>The Scoping Report for Dogger Bank D<sup>30</sup> publicly released following the submission of the Projects Draft DCO [APP-027] Application in June 2024, does not state the potential location or indicative proportions of any cable protection measures to be used within that projects offshore export cable corridor. As such, there is insufficient information available at this time to include Dogger Bank D in the Projects cumulative assessment on the Spurn Head geological feature.</i></p> <p>No further publicly available information regarding the project parameters for Dogger Bank D have been released following the submission of the above response. As such the Applicants maintain their position on this matter.</p> |
| REP2-069:B40 | <p><i>Further mitigation could be applied to avoid potential impacts to sediment transport on the MCZ. (8.17)</i></p> <p>No change - Please see Appendix B2 and our comments on the Benthic Technical note [AS-104] included within Deadline 2 Appendix C2.1.</p>                                                                                                                                                                                                 | See the Applicants' response to this matter in <b>Table 2-6</b> , REP2-064:2 and <b>Table 2-9</b> above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| REP2-069:B41 | <p><i>The conservation objectives for the Holderness Inshore MCZ could be hindered due to the current dML condition allowing 10% of the export cable to be protected from 350m seaward of MLWS to the 10m depth contour. This could disrupt sediment transport associated with Holderness Inshore MCZ. (8.17)</i></p> <p>No change - Please see Appendix B2 and our comments on the Benthic Technical note [AS-104] included within Deadline 2 Appendix C2.1.</p> | See the Applicants' response to this matter in <b>Table 2-6</b> , REP2-064:2 and <b>Table 2-9</b> above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| REP2-069:B43 | <p><i>This document will need updating pre-consent based on comments Natural England has provided on the EIA within Appendix B and C as currently we do not agree with conclusions on the level of impacts. (8.18)</i></p> <p>No change - no new information relevant to this issue is likely to be submitted by the Applicant and we will review once submitted</p>                                                                                              | See the Applicants' response to REP2-069: B1 regarding the updating of the ES and RIAA above, which also applies to the MCZA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| REP2-069:B44 | <i>The whole of the offshore windfarm array footprints, the inter-cable platform corridor and the export cable corridors will be disposal locations, but deposition will only occur where possible within the same sediment. Given that sandwave levelling is likely to be undertaken by suction</i>                                                                                                                                                              | See the Applicants' response to this matter in Table 2-7, REP2-065:3.1 to REP2-065:3.6 above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

<sup>30</sup> Dogger Bank D Scoping Report

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|              | <p><i>hopper dredge and then sediment released at the sea surface, it is unlikely that this will occur. We advise that disposal options are explored to ensure that sediment is deposited in similar sediment types. (8.18)</i></p> <p>No change - See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>The Applicants have committed to depositing like sediment on like sediment within the boundary of the Dogger Bank SAC, thus ensuring, as Natural England have requested, that sediment both remains within the system and sandbank recovery is enabled.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| REP2-069:B45 | <p><i>We advise the mitigation in Section 5.2 does not go far enough, especially within the Dogger Bank SAC and in areas where there are priority habitats and/or indirect impacts to designated site features could occur. We advise that the following mitigation measures are adopted (but not exclusively):</i></p> <ul style="list-style-type: none"> <li><i>- All deposition of dredged sediment within the Dogger Bank SAC should be done through the use of a fall pipe and adjacent and upstream of the dredge location in same sediment type to ensure sediment stays within the site.</i></li> <li><i>- Drill arisings should be deposited within similar sediment characteristics i.e. not on sandbanks. Therefore, adjacent to turbines is unlikely to be appropriate.</i></li> <li><i>- Sandwave deposition should avoid areas of priority habitats under NERC 2006 by the inclusion of a 50m buffer around the NERC habitats.</i></li> <li><i>- Deposition of dredge material along the export cable should utilise a fall pipe where there is a risk of increases in suspended sediment concentrations impacting on designated site features and those of ecological importance. (8.18)</i></li> </ul> <p>No change - see point B36 and B44 and Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p> | <p>See the Applicant's response to this matter in <b>Table 2-7</b>, REP2-065:3.1 to REP2-065:3.6 and REP2-065: 8.2 above.</p> <p>The Applicants have committed to depositing like sediment on like sediment within the boundary of the Dogger Bank SAC, thus ensuring, as Natural England have requested, that sediment both remains within the system and sandbank recovery is enabled.</p> <p>As regards the use of a fall pipe, or 'down pipe', the Applicants' dredging specialists are not aware of a TSHD vessel that that would meet the requirements of the Projects that possesses a fall pipe or down pipe deposition facility. If Natural England are able to demonstrate the existence of such vessels that might meet the needs of the Projects, then the Applicants will further consider the practicability of this request. The Applicants cannot commit to delivering mitigation that they do not regard as technically feasible.</p> |
| REP2-069:B47 | <p><i>We advise that this document needs to better consider the risk and implications of secondary scour occurring. (8.27)</i></p> <p>No change. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>See the Applicants' response to this matter in response to the first item in <b>Table 2-8</b> above.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| REP2-069:B48 | <p><i>Section 1.2 - Consideration should be given to comments made in relation to minimising environmental impacts as much as possible through the choice of scour prevention/cable protection. Every effort should be made to avoid using those that are least likely to be recovered at the time of decommissioning. (8.27)</i></p> <p>No change - We refer you to Appendix C2.1 of Natural England's Deadline 2 submission and the link to Natural England's published paper on decommissioning of cable protection.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>See the Applicants' response to this matter in <b>Table 2-7</b>, REP2-065:7.1 and REP2-065:7.2 above.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| REP2-069:C1  | <p>Initial Written Representation - <i>There are inconsistencies in the impact assessment calculations across the various chapters/documents. For example, maximum anchoring footprint for export cable installation, total array areas and offshore ECC cable corridor construction footprint etc. We advise that the maximum temporary construction footprints are reviewed and updated where necessary. (7.05)</i></p> <p>Deadline 1 Status - <i>Issue progressed. The Applicant has clarified the differences in values presented and confirmed that some were incorrect. We advise that the relevant ES chapters and documents are updated as needed.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>See the Applicants' response to REP2-069: B1 regarding the updating of the ES and RIAA above.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| I.D.        | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | No change - no new information relevant to this issue has been submitted at this deadline.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| REP2-069:C4 | <p><i>Clarity is needed on how the potential for the addition of further cable/scour protection during the operational phase has been considered and included within the worst-case calculations for cable/scour protection. It is unclear whether figures provided in the Offshore Operations and Maintenance Plan (OOMP; APP-248) for replacement cable protection for the export cables have been integrated into the Project Description. Estimates for cable protection replacement requirements for the inter-array and inter-platform cables have also not been provided. We advise that the standard for quantities of additional scour and/or cable protection outside of benthic SACs is for the replenishment of 10% of any scour prevention/cable protection laid during installation within a 10-year period, as long as the overall footprint is not increased. Any additional scour prevention/cable protection during the operational phase within a designated site will require a separate Marine Licence. See C13 below. (7.05, 8.24)</i></p> <p>No change. See Appendix C2.1 and C2.2 of Natural England's Deadline 2 submission for further detail.</p> | See the Applicants' response to this matter in <b>Table 2-7</b> , REP2-065:6 above.                                                                                                                                                                                                                                                                                                                                                                        |
| REP2-069:C5 | <p><i>We are concerned that Table 2-3 of the OOMP indicates that the Applicant considers the lifetime footprints presented in the Project Description to be allowances for cable protection to be installed at any point through the lifetime of the Projects, rather than the amount that will be required for the construction phase alone, which will subsequently have a footprint and impact for the lifetime of the project. We advise that the maximum design parameters for the ECC and array area, including the lifetime footprint, should be revised to only include cable/scour protection anticipated to be installed during construction. The OOMP should also be updated to reflect the licensing requirements for additional protection installed within Dogger Bank SAC during operation. (7.05, 8.25)</i></p> <p>No change. See Appendix C2.1 and C2.2 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                  | <p>The maximum design parameters reflect the levels of scour and cable protection that could be required for the Projects during construction and / or operation. As such they represent the maximum proposed levels for installation during construction and no revisions are proposed to the levels presented within the worst case scenarios as a result.</p> <p>See the Applicants' response to this matter in <b>Table 2-7</b>, REP2-065:6 above.</p> |
| REP2-069:C6 | <p><i>Initial Written Representation - There are contradictions with regard to the inclusion of cofferdams in the Project scope, including the dimensions provided. It is also stated that the Project has committed to not using cofferdams within the exit pits. Clarification is required on the WCS for the landfall works in relation to cofferdam usage - any documents and assessments should be updated accordingly. (7.09)</i></p> <p><i>Deadline 1 Status - Issue progressed. The Applicant has confirmed that no cofferdams would be used in the Projects' Landfall Zone and that the inclusion of cofferdams within Table 9-1 was an error. The relevant ES chapters and documents should be updated to reflect this.</i></p> <p>No change - no new information relevant to this issue has been submitted at this deadline.</p>                                                                                                                                                                                                                                                                                                                                  | See the Applicants' response to REP2-069: B1 regarding the updating of the ES and RIAA above.                                                                                                                                                                                                                                                                                                                                                              |
| REP2-069:C7 | <p><i>The Applicant has not sufficiently characterised benthic receptors within Flamborough Head SAC. All benthic receptors within the ZoI, particularly those within designated sites, need to be sufficiently characterised to enable a robust, evidenced assessment to be undertaken and presented. In the absence of characterisation of benthic receptors at a suitable resolution, the WCS needs to be presented (e.g. most sensitive biotope within the broadscale habitat used as a</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | See the Applicants' response to this matter in <b>Table 2-9</b> . The Applicants have updated the <b>Benthic Ecology Technical Note (Revision 2)</b> [document reference 10.38] which has been submitted at Deadline 3 to include the additional detail for the biotopes and species that comprise the qualifying features of the Holderness Offshore and Inshore Marine Conservation Zones and the Flamborough Head Special Area of Conservation          |

| I.D.        | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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|             | <p><i>basis for assessments) to consider the sensitivity or recoverability of the benthic receptors to the identified pressure pathways. (7.09, 6.1)</i></p> <p>No change. See Appendix C2.1 of Natural England's Deadline 2 submission for comments on 10.38 Benthic Ecology Technical Note [AS-104].</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| REP2-069:C8 | <p><i>The cumulation of benthic 'ecological halo effect' following the placement of structures on the seabed has not been considered. A robust assessment is needed of the potential Worst-Case area of impact on benthic communities within Dogger Bank SAC sandbank feature, and the nature and scale of that impact, as a result of changes to physical and biological processes following the placement of structures and cable/scour protection on the seabed. Once assessments have been updated, monitoring should be secured via the In principal monitoring plan to determine whether the residual impacts are as predicted. (7.09)</i></p> <p>No change - Natural England maintain our advice provided at Relevant Reps. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                  | See the Applicants' response to this matter in <b>Table 2-7</b> , REP2-065:1.1 to REP2-065:1.4 above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| REP2-069:C9 | <p><i>It is unclear how the 'value' of receptors has been consistently incorporated into the assessment process. The Applicant has considered all biotopes within the red line boundary, with the exception of those characterised by piddocks, to be of low value. This includes biotopes representative of Annex 1 habitat within Dogger Bank SAC, and no consideration has been given to biotopes within Flamborough Head SAC. We advise that the methods and rationale for valuing benthic receptors, and how value has been used within the assessment process, is reviewed and documents updated accordingly. The significance of impacts on all benthic receptors should thereafter be reassessed. (7.09)</i></p> <p>No change. We continue to advise that an appropriate value should be attributed to biotopes/habitats which contribute to Annex I features, and subsequently more appropriately used to inform the magnitude of impacts. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p> | <p>See the Applicants' response to this matter in <b>Table 2-7</b>, REP2-065:2.1 above.</p> <p>Biotopes within the Flamborough Head SAC have been assessed in the <b>Benthic Ecology Technical Note (Revision 2)</b> [document reference: 10.38].</p> <p>We note that Natural England states that sensitivity should be '<i>used to inform the magnitude of impacts</i>' but this is double counting. Sensitivity (which includes value where appropriate) and magnitude are two different concepts and these are defined in section 6.7.3 of <b>Chapter 6 – Environmental Impact Assessment Methodology</b> [APP-076]: <i>Receptor sensitivity is determined by considering a combination of adaptability, tolerance and recoverability</i></p> <p><i>...it is important to establish the magnitude and probability of an impact occurring through a consideration of:</i></p> <ul style="list-style-type: none"> <li>• <i>Scale of spatial extent (small scale to large scale or most of the population or a few individuals;</i></li> <li>• <i>Duration (short term to long term);</i></li> <li>• <i>Likelihood of impact occurring;</i></li> <li>• <i>Frequency; and</i></li> <li>• <i>Nature of change relative to the baseline.</i></li> </ul> <p>As noted in <b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085], the '<i>value</i>' of the receptor forms an important element within the assessment, for instance if the receptor is a protected species or habitat it is considered to be of higher value than a habitat or species that is not protected. It is important to understand that high value and high sensitivity are not necessarily linked within a particular effect. A receptor could be of high value (e.g. Annex I habitat) but have a low or negligible physical / ecological sensitivity to an effect. Similarly, low value does not equate to low sensitivity and is judged on a receptor-by-receptor basis. The value will be considered, where relevant, as a modifier for the sensitivity assigned to the receptor, based on expert judgement.</p> <p>The habitat 'Piddocks with a sparse associated fauna in sublittoral very soft chalk or clay' was assigned a medium value due to this specific habitat being associated with the UK BAP priority habitat 'Peat and clay exposures with piddocks'. The remaining identified biotopes, while in some instances being located within protected areas, are not themselves protected habitats specifically. This approach to assigning value is consistent with the definitions of value presented in Table 9-9 of <b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085].</p> |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| REP2-069:C10 | <p><i>We disagree with "Habitats or species that provide prey items for other species of conservation value" being considered of low value in the assessment. Of note are spawning/nursery grounds for sandeel and herring, both of which are an important prey resource for Annex I bird species and Annex II marine mammal features of designated sites. Within the wider marine environment impacts to habitats that provide prey availability may be considered as low, however it should be recognised that some areas remain more important than others. The importance of the 'Dogger Bank' area for fish species is well documented. We advise that a generic low value can't be attributed to all areas within the red line boundary. We also advise that impacts to benthic habitats which reduce/remove their ability to support benthic communities which are integral to maintaining populations of Annex I and II designated site features, needs to be fully considered within the ES. (See Sheet E for further comments on indirect effects) (7.09)</i></p> <p>No change. We note the Applicant has contested the importance of the Dogger Bank sandbank system for prey availability and foraging species. Natural England disagrees with the justification provided and therefore maintains the advice provided in our Relevant Representation on this issue.</p> | <p>Note that if the Applicants assigned prey species in the EIA as high value and high sensitivity, the significance of effect for the assessment of all impacts would be minor adverse, which is not significant in EIA terms. This is due to the negligible magnitude of impacts (e.g. 0.018% of the medium to high potential habitat for sandeel of the SAC for habitat loss and 0.23% of the medium to high potential habitat for sandeel of the SAC for disturbance). There would be no change to the assessment conclusions if the sensitivity was increased.</p> <p>The Applicants reiterate that the value of the Dogger Bank as an Annex 1 feature is considered within the <b>RIAA HRA Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)</b> [AS-051] whilst the value the biotopes found there-upon are considered in the ES.</p> <p>The Applicants do not contest that the Dogger Bank is a foraging area for mobile species, but seek to highlight that it is not the <i>only</i> foraging area for these species. Therefore, when considering effects on foraging for mobile species the SAC boundary is less relevant and foraging should be seen in the wider regional context of prey available to the wide-ranging predators of interest to Natural England – all of whom have foraging ranges of many, many thousands of km<sup>2</sup> across areas many times the size of the proposed Offshore Development Area, hence the approach taken. In terms of the EIA, the SAC boundary is used as a geographic reference only based on the pre-application advice of NE that there should be a clear separation between EIA and HRA assessment.</p> <p>The supporting role of benthic habitats and fish and shellfish for other features is considered within both the ornithology assessment (<b>Chapter 12 Offshore Ornithology (Revision 2)</b> [AS-057] and <b>RIAA HRA Part 4 of 4 - Marine Ornithological Features (Revision 3)</b> [AS-085]) and marine mammal assessment (<b>Chapter 11 Marine Mammals</b> [APP-095] and <b>RIAA HRA Part 3 of 4</b> [APP-047]). The impacts are assessed within <b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085] and <b>Chapter 10 - Fish and Shellfish Ecology</b> [APP-091]) and then cross-referenced in the relevant assessments for ornithology and marine mammals for all phases of the Projects (construction, operation and decommissioning). The Applicants therefore consider that the assessment is line with best practice for offshore wind assessments.</p> |
| REP2-069:C11 | <p><i>Loss of benthic habitat as a result of UXO clearance, particularly within Dogger Bank SAC, should be added to the worst-case calculation for the EIA and RIAA, whether it be temporary or otherwise. We advise that the Applicant also needs to evidence their claim that "craters would be expected to re-fill with sediment over the course of days" (applies to both UXO detonations and jack-up operations). If depressions are created from UXO clearance or jack-up operations in areas of coarse or mixed sediments, the area may need to be considered as permanent habitat change/loss unless it can be otherwise evidenced that they will backfill with similar sediment types. We consider that recovery is altogether unlikely within the irreplaceable NERC Section 41 habitats which have been identified within the red line boundary (i.e. Piddocks with a sparse associated fauna in sublittoral very soft chalk or clay). (7.09, 6.1, 7.05)</i></p> <p>No change. See Appendix C2.1 and Section 3 of Appendix F2 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                         | <p>In terms of UXO clearance this would be subject to a separate ML application. Appendix B - Dogger Bank B UXO crater survey results of <b>Review of evidence on recovery of sandbank habitat following habitat damage</b> [AS-025] provides the results from several high-order clearances. These show a maximum crater diameter of around 5m. – therefore a crater would be around 20m<sup>2</sup>, and 100 such clearances would equate to 2,000m<sup>2</sup>. This equates to approximately 0.007% of the assessed total area of disturbance from construction from the Projects within the SAC. The Applicants do not consider that this represents a material consideration in the assessment given the estimation already required for cumulative / in-combination projects in relation to disturbance.</p> <p>In terms of recovery, see the Applicants' response to this matter in the first item of <b>Table 2-7</b> above.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| REP2-069:C12 | <p><i>The Applicant has not committed to using any specific type of cable/scour protection and has not considered the limitations some methods present with regard to successful decommissioning and/or likelihood of degradation over the lifetime of the project, which could have wider impacts in the case of grout bags/bagged solutions. Due consideration should be given to the nature of the cable/scour protection used and should favour those engineering options with the greatest likelihood of successful removal at the Projects' end of life. We advise against the use of rock</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>See the Applicants' response to this matter in <b>Table 2-7</b>, REP2-065:7.1 above.</p> <p>As noted in REP2-065:7.1, the Applicants will continue to give due consideration to the use of removable cable and scour protection measures during the detailed design stages of the Projects post-consent, with Natural England afforded opportunities to comment on these proposals in relation to the Final Cable Statements and Scour</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p><i>protection within designated sites and against grout bags, unless filled with locally sourced sediment similar to that within the SAC. (7.05)</i></p> <p>No change. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>Protection Plans. Should the use of removable cable and scour protection be deemed viable, then the footprint of compensation relative to the footprint of impacts would be further enhanced on decommissioning.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| REP2-069:C13 | <p>Initial Written Representation - <i>We advise that the Applicant commits to bundling the export cables for each project as mitigation - this would halve the number of trenches needed (from two to one for each array) and reduce cable protection requirements. (7.05)</i></p> <p>Deadline 1 Status - <i>Issue progressed. We welcome the Applicant's commitment to bundling the export cables in the updated Cable Statement ([AS-079] 8.20 Cable Statement Rev 02). We advise that this commitment is secured in the DCO and/or commitment register and relevant application documents and assessments are revised accordingly.</i></p> <p>No change - no new information relevant to this issue has been submitted at this deadline.</p> | <p>The Applicants direct Natural England to the response on this matter provided at Deadline 2 in <b>The Applicants' Responses to Deadline 1 Documents</b> [REP2-058] under ID REP1-067:B49, and repeated below for convenience:</p> <p><i>The Applicants acknowledge this comment. The commitment to cable bundling has been made in the <b>Cable Statement (Revision 2)</b> [AS-078]. Each Deemed Marine Licence (Schedules 10-14) presented in the <b>Draft DCO (Revision 5)</b> [REP1-004] contains a condition (such as condition 15 (1) (g) in Schedule 10) which states that construction activities may not commence until a final cable statement (in accordance with the cable statement) has been submitted to and approved in writing by MMO, in consultation with Trinity House, the MCA, the relevant statutory nature conservation body and UKHO as appropriate. Through this mechanism this commitment is secured by the Draft DCO as it stands and no updates to the Application are necessary.</i></p> <p>This commitment has also been included in the updated <b>Commitments Register (Revision 2)</b> [REP2-025] which was also submitted at Deadline 2 (and noted in the Applicants response to item REP1-067:C13 within <b>The Applicants' Responses to Deadline 1 Documents</b> [REP2-058]).</p> |
| REP2-069:C14 | <p><i>The provision of a Cable Statement/Cable Burial risk assessment is not embedded mitigation, as the specific commitments within the final detailed plans will be key in determining the effectiveness of the mitigation. Should further commitments and/or changes to project design be made by the Applicant, the impact assessment should be updated. (7.09, 6.1, 8.18)</i></p> <p>No change - no new information relevant to this issue has been submitted at this deadline.</p>                                                                                                                                                                                                                                                         | <p>The Applicants have assessed the worst case and are not of the opinion that any updates to the assessments are necessary or proportionate. Any changes to the project design would be within the envelope established and thus any impacts would be no worse than those predicted at the point of consent. In light of this, the Applicants maintain their position regarding this matter as provided in response to RR-039: C24 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below:</p> <p><i>The Applicants note Natural England's position regarding the provision of a Cable Statement / Cable Burial Risk Assessment as embedded mitigation. The Cable Statement will continue to be updated throughout the lifetime of the Projects, including any potential additional mitigation agreed by the Applicants.</i></p> <p><i>Any updates in assessments as a result of changes to the Projects' Design Envelope or stakeholder comments will be captured through submissions to the examination.</i></p>                                                                                                                                                                                                                                                          |
| REP2-069:C16 | <p><i>We do not agree that an AEol can be excluded from the disturbance/damage of Annex I sandbanks within the Dogger Bank SAC. Unlike more dynamic sandbanks, the length of time for recovery could be up to 25 years. We highlight that the R4 Plan Level benthic compensation includes the requirement for benthic compensation for disturbance/damage caused to Annex I 'glacial till' Annex I Sandbanks within Dogger Bank SAC. (6.1)</i></p> <p>No change. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                            | <p>See the Applicants' response on this matter in <b>Table 2-10</b> above.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| REP2-069:C17 | <p><i>Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion, should be screened in for the Operation and Maintenance phase for Dogger Bank SAC. (6.1)</i></p> <p>No change. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>This impact was included within the assessment, see paragraph 31 of <b>Habitats Regulations Assessment Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)</b> [AS-051].</p> <p>See the Applicants' response to REP2-069: B1 regarding the updating of the ES and RIAA above.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| REP2-069:C18 | <p><i>Full consideration of the likely nature, extent, duration, and significance of impacts upon SPA and SAC supporting habitats is required to inform a robust assessment of the likely impacts upon</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>See the Applicants' response to REP2-069:C10 above.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p><i>designated ornithological and marine mammal features. We consider that this has not been adequately undertaken for sites including Flamborough and Filey Coast SPA and the Southern North Sea SAC. (7.09)</i></p> <p>No change. We note the Applicant has contested the importance of the Dogger Bank sandbank system for prey availability and foraging species. Natural England disagrees with the justification provided and therefore maintains the advice provided in our Relevant Representation on this issue.</p>                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                          |
| REP2-069:C19 | <p><i>The worst-case suspended sediment concentrations from trenching activities in the ECC are inconsistent between the RIAA and EIA chapters - we advise that the EIA and/or RIAA are updated with accurate worst-case prediction values as needed. (6.1, 7.09)</i></p> <p>Issue progressed. As noted at DL1, the Applicant has provided clarification on the WCS SSC due to cable trenching within the array areas and offshore export cable corridor. The Applicant considers that the correction does not alter the assessment conclusions reached in the Benthic Ecology chapter [APP-085] or RIAA HRA Part 2 of 4 [APP-046]. We advise that relevant documents are updated to reflect these changes and to fully resolve this issue. We also seek confirmation from the Applicant that the predicted worst-case values for sediment deposition resulting from a sediment plume (due to trenching) have not changed as well.</p> | <p>See the Applicants' response to REP2-069: B1 regarding the updating of the ES and RIAA above.</p> <p>The Applicants can confirm that the predicted worst-case values for sediment deposition resulting from a sediment plume (due to trenching) remain unchanged from that assessed previously (see the Applicants' response to REP2-065:5.4 above for further detail regarding sediment deposition assumptions).</p> |
| REP2-069:C21 | <p><i>Clarification is required on the WCS for sandwave levelling/seabed clearance. We also advise that within benthic MPAs any sediment deposition is located within areas of similar sediment type, as close to and upstream of the original sandwave, and is deposited using a fall pipe (should a suction hopper dredger be used). An outline sandwave levelling, deposition and recovery plan should be provided as either a standalone document or as part of the Cable Statement [APP-242] /Outline Cable Burial Risk Assessment. (6.1, 7.09, 8.18)</i></p> <p>No change. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail. We note there is a potential for this to become a red risk depending on the Applicant's response.</p>                                                                                                                                                                | <p>See the Applicants' response on this matter in <b>Table 2-7</b>, REP2-065:3.5 above.</p> <p>As noted in the Applicants Deadline 2 submissions, the <b>Cable Statement (Revision 3)</b> [REP2-039] has been updated to note that further detail relating to sand wave levelling, deposition and sandbank recovery will be provided in the final Cable Statement(s) and / or final CBRAs.</p>                           |
| REP2-069:C23 | <p><i>We do not agree with the worst-case calculation of area of loss due to change to another seabed/sediment type for Dogger Bank SAC presented in the RIAA as we are not confident that the calculations are based on realistic worst-case calculations (C12, C13, C18, C35). We advise that a robust assessment is provided of the potential Worst-Case area of impact on benthic communities within Dogger Bank SAC sandbank feature. Consideration should be given to the nature of the impact as a result of changes to physical and biological processes, following the placement of structures and cable/scour protection on the seabed. (6.1) See also C18.</i></p> <p>No change. See point C8 for further information.</p>                                                                                                                                                                                                  | <p>See the Applicants' response to this matter in <b>Table 2-7</b>, REP2-065:1.1 to REP2-065:1.4 above.</p>                                                                                                                                                                                                                                                                                                              |
| REP2-069:C24 | <p><i>Natural England advise that a tidal ellipse is used to estimate the zone of greatest influence for sediment plumes for the array area and export cable corridor. We note that the Zone of Influence (Zol) for suspended sediment has been updated to 8km (6.1, Table 6-1) based on site specific physical processes modelling undertaken. It is unclear as to where the 8km Zol is derived from. The Applicant should provide further clarity on estimated sediment plume sizes including which</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>See the Applicants' response on this matter in <b>Table 2-7</b>, REP2-065:5.1 to REP2-065:5.3 above.</p>                                                                                                                                                                                                                                                                                                              |

| I.D.          | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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|               | <p>values have been used to assess for Changes in Suspended Sediment Concentration and Transport due to Cable Installation (Array, Inter Platform and Export) and smothering and siltation for all relevant parts of the Application. (6.1, 7.08)</p> <p>No change. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| REP2-069:C25  | <p>A drill arising footprint has not been provided. The placement of drill arisings adjacent to turbines may result in further habitat loss/change. As mitigation, the Applicant should commit to the placement of drill arisings in areas of similar habitat/particle size. Otherwise, this will need to be assessed similar to that of scour prevention/cable protection as a lasting impact included within the AEoI for Dogger Bank SAC and commitments to remove at the time of decommissioning will be required. (6.1)</p> <p>No change. We maintain our previous advice that the placement of drill arisings adjacent to turbines may result in further habitat loss/change. If drill arisings cannot be placed in areas of similar habitat / particle size, further assessment for habitat loss will be required. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p> | <p>See the Applicants' response on this matter in <b>Table 2-7</b>, REP2-065:8.1 and REP2-065:8.2 above.</p> <p>As noted in REP2-065:8.2 specific reference to dissipation of drill disposal mounds can be added for operational monitoring if required and the <b>In Principle Monitoring Plan (Revision 2)</b> [REP2-043] updated.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| REP2-069:C27  | <p>A commitment to remove all on and above seabed infrastructure (including cable and scour protection) at the time of decommissioning should be secured in the DCO, as has been required for all offshore wind farms previously consented within the Dogger Bank SAC. (7.05)</p> <p>No change. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>See the Applicants' response to this matter in <b>Table 2-7</b>, REP2-065:7.1 above.</p> <p>As noted in REP2-065:7.1, the Applicants will continue to give due consideration to the use of removable cable and scour protection measures during the detailed design stages of the Projects post-consent, with Natural England afforded opportunities to comment on these proposals in relation to the Final Cable Statements and Scour Protection Plans. Should the use of removable cable and scour protection be deemed viable, then the footprint of compensation relative to the footprint of impacts would be further enhanced on decommissioning.</p>                                                                                                                                                                                                                                               |
| REP2-069:C28a | <p>The Applicant has given consideration to identifying areas of shallow glacial till in the Offshore Development Area to inform post-consent discussions on micro-siting cables. However, the DCO conditions listed do not secure this as they only refer to identifying priority habitats, which would not include glacial till. We advise this mitigation should be applicable to underlying glacial sediments within Dogger Bank SAC as well as priority habitat identified along the ECC, e.g. piddocks. We advise that the DCO conditions listed are updated to secure this.</p> <p>Issue resolved. The relevant DCO conditions have been updated to include surficial deposits of glacial till [AS-121]. For consistency, we would welcome this also being updated in the Commitments Register.</p>                                                                                                     | <p>The Applicants welcome Natural England's agreement on this matter, and confirm that the <b>Commitments Register (Revision 2)</b> [REP2-025] issued at Deadline 2 included updates to commitment C091 to specifically refer to surficial deposits of glacial till.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| REP2-069:C28b | <p>A pre-consent Outline Cable Burial Risk Assessment within an updated Cable Statement should also be provided which considers all available geotechnical information to implement mitigation measures which further avoid, reduce and mitigate impacts by ensuring that optimal cable burial depths can be achieved, thus avoiding/reducing the need for cable protection and enabling a realistic worst case scenario to be assessed. (7.09)</p> <p>No change - no new information relevant to this issue has been submitted at this deadline.</p>                                                                                                                                                                                                                                                                                                                                                          | <p>It should be noted that an updated CBRA for the Offshore Export Cables was issued within the updated <b>Cable Statement (Revision 3)</b> [REP2-039] at Deadline 2. This update includes only the Offshore Development Area being brought forward for consent, amongst a host of other updates.</p> <p>The CBRAs produced to date include geophysical and geotechnical information where available, in line with best practice.</p> <p>The Applicants would like to reiterate that the final versions of the CBRAs will not be completed within the time frame of examination. There will also be no further updates to any existing CBRAs within the time frame of examination. This is because there is no new information or data available to the Applicants that can provide any further understanding than has already been documented. The Applicants are in the process of planning additional</p> |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>surveys for summer 2025. When the results become available, they will feed into an array area CBRA which will be produced post consent.</p> <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: C24 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below:</p> <p><i>The Applicants note Natural England's position regarding the provision of a Cable Statement / Cable Burial Risk Assessment as embedded mitigation. The Cable Statement will continue to be updated throughout the lifetime of the Projects, including any potential additional mitigation agreed by the Applicants.</i></p> <p><i>Any updates in assessments as a result of changes to the Projects' Design Envelope or stakeholder comments will be captured through submissions to the examination.</i></p>                                                                                                           |
| REP2-069:C32 | <p><i>This document will need updating pre-consent based on comments Natural England has provided on the EIA within Appendix B and C as currently we do not agree with conclusions on the level of impacts. (8.18)</i></p> <p>No change. We continue to advise that this document will need updating pre-consent.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | See the Applicants' response to REP2-069 B1 regarding the updating of the ES and RIAA above, which is also relevant to the <b>Stage 1 MCZA</b> [APP-240].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| REP2-069:C33 | <p><i>The whole of the offshore windfarm array footprints, the inter-cable platform corridor and the export cable corridors will be disposal locations, but deposition will only occur where possible within the same sediment. Given that sandwave levelling is likely to be undertaken by suction hopper dredge and then sediment released at the sea surface, it is unlikely that this will occur. We advise that disposal options are explored to ensure that sediment is deposited in similar sediment types. (8.18)</i></p> <p>No change. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail. We note there is a potential for this to become a red risk depending on the Applicant's response.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | See the Applicants' response on this matter in <b>Table 2-7</b> , REP2-065:3.5 above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| REP2-069:C34 | <p><i>We advise the mitigation in Section 5.2 does not go far enough, especially within the Dogger Bank SAC and in areas where there are priority habitats and/or indirect impacts to designated site features could occur. We advise that the following mitigation measures are adopted (but not exclusively):</i></p> <ul style="list-style-type: none"> <li><i>- All deposition of dredged sediment within the Dogger Bank SAC should be done through the use of a fall pipe and adjacent and upstream of the dredge location in same sediment type to ensure sediment stays within the site.</i></li> <li><i>- Drill arisings should be deposited within similar sediment characteristics i.e. not on sandbanks. Therefore, adjacent to turbines is unlikely to be appropriate.</i></li> <li><i>- Sandwave deposition should avoid areas of priority habitats under NERC 2006 by the inclusion of a 50m buffer around the NERC habitats.</i></li> <li><i>- Deposition of dredge material along the export cable should utilise a fall pipe where there is a risk of increases in suspended sediment concentrations impacting on designated site features and those of ecological importance. (8.18)</i></li> </ul> | <p>See the Applicants' response regarding the use of a fall pipe and drill arisings in <b>Table 2-7</b>, REP2-065:3.5 and REP2-065:8.2 respectively.</p> <p>As noted in REP2-065:8.2 specific reference to dissipation of drill disposal mounds can be added for operational monitoring if required and the <b>In Principle Monitoring Plan (Revision 2)</b> [REP2-043] updated.</p> <p>As noted in the response to REP2-065:3.1, the Applicants have committed to depositing like sediment on like sediment within the boundary of the Dogger Bank SAC, thus ensuring, as Natural England have requested, that sediment both remains within the system and sandbank recovery is enabled.</p> <p>Commitment Cog1 of the <b>Commitments Register (Revision 2)</b> [REP2-025] (and secured in the <b>Draft DCO (Revision 6)</b> [document reference: 3.1]) commits the Projects to micro-site around UK BAP Priority Habitats, should they be identified during pre-construction surveys.</p> |

| I.D.        | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | No change. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail. We note there is a potential for this to become a red risk depending on the Applicant's response.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| REP2-069:D1 | <i>The SNCBs are not in agreement on the presented WCS of habitat damage of Annex I Sandbanks within Dogger Bank SAC. We advise that the points raised in Appendix B and C of our Relevant Representations/Written Representations (RR/WR) are addressed.</i><br><br>Please see Natural England's Deadline 2 cover letter                                                                                                                                                                                                                                                                                                                       | The Applicants have provided responses to Natural England comments on the <b>Review of evidence on recovery of sandbank habitat following habitat damage (Revision 1)</b> [AS-025] in <b>Table 2-10</b> of this document.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| REP2-069:D2 | <i>The SNCBs have outstanding concerns about the outcomes of the Impact Assessment and evidence used to support conclusions on scale and significance of potential impacts from cable installation activities and cable protection installation from DBS. Until these issues are resolved we do not agree with the scale and extent of the compensation measures required. This compensation measure will be led by DEFRA (with interested parties), therefore delivery mechanisms, scale costs and timeframes presented by the Applicant cannot and should not be relied upon.</i><br><br>Please see Natural England's Deadline 2 cover letter | The Applicants acknowledge this response.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| REP2-069:D3 | <i>We recognise that there are likely to be time lags between impact occurring and compensation achieving the desired outcomes. In this scenario, the SNCBs would wish to see the project contribution to the measure to be such that it ensures an overall environmental net positive outcome for the impacted feature over the lifetime of the project. We advise that the points raised in Appendix B and C of our RR/WR are addressed.</i><br><br>Please see Natural England's Deadline 2 cover letter                                                                                                                                      | <p>The Applicants acknowledge this response, and note that further information regarding any potential 'time lag' between impacts occurring and compensation being secured is detailed in the Written Ministerial Statement<sup>31</sup> from Defra, published on 29<sup>th</sup> January 2025, and repeated below for convenience:</p> <p><i>Designating new MPAs and putting management measures in place to protect them will take time. Although work has already begun on this, we are aware that the timelines of some projects mean that they will still be delayed if they are required to wait for MPA designations and associated management to be functioning. Where this is the case, the DESNZ Secretary of State and the Marine Management Organisation may consider circumstances where the adverse effect can occur before compensation is in place, however this would need to be considered against other factors. Where this is permitted, a greater amount of environmental compensation is likely to be needed to make up for the time delay and developers will be required to pay into the Marine Recovery Fund before any adverse effect can occur. Defra will also be producing high-level implementation and monitoring plans in advance of final MPA designations to assist developers in providing the necessary information at this stage, with final updated plans being provided once designation has taken place.</i></p> <p>The Applicants will continue to consult with Natural England and other SNCB's regarding the compensation quantum required for the Projects through the pre and post-consent stages of the Projects.</p> <p>The Applicants have provided further responses to Natural England's comments regarding benthic ecology and the Dogger Bank SAC in <b>Table 2-7 – Table 2-10</b> of this document.</p> |
| REP2-069:D4 | <i>This is still under consideration by DEFRA, NE and JNCC and as yet, nothing has been agreed and/or secured. If and when further information becomes available during Examination we will</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                 | As noted in Natural England's Cover Letter and Annex I [REP2-068], the Written Ministerial Statement <sup>32</sup> from Defra was published on 29 <sup>th</sup> January 2025, which confirmed DEFRA's support for delivery of strategic benthic compensation, making wider compensation measures available and delivery of compensation through the MRF.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

<sup>31</sup> Written statements - Written questions, answers and statements - UK Parliament

<sup>32</sup> Written statements - Written questions, answers and statements - UK Parliament

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Applicants' Response                                                                                  |
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|              | <p>update accordingly. However, any assurances in the security of this measure should be sought directly from DEFRA.</p> <p>Please see Natural England's Deadline 2 cover letter</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                       |
| REP2-069:D21 | <p><i>The Dogger Bank Strategic Compensation Plan (DBSCP) and the project compensation do not align, with the exclusion of compensation requirements for damage to sandbanks. Benthic compensation measures for habitat disturbance of Annex I sandbanks from the project level compensation documents are omitted. We would fully expect the DCO to include compensation for both habitat loss and damage. Further consideration should be given to Plan Level compensation requirements as agreed by the Secretary of State for the Department of Energy Security and Net Zero.</i></p> <p>No change - Please see Deadline 2 Appendix 2.1.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | See the Applicants' response on this matter in <b>Table 2-10</b> .                                    |
| REP2-069:E10 | <p><i>Include a robust assessment of the potential Worst-Case area of impact on benthic communities, particularly those highlighted as spawning areas along the ECC, and within Dogger Bank SAC sandbank feature, and the nature and scale of that impact, as a result of changes to physical and biological process following the placement of structures and cable/scour protection on the seabed (benthic 'ecological halo effect').</i></p> <p>No change. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | See the Applicants' response on this matter in <b>Table 2-7</b> , REP2-065:1.1 to REP2-065:1.4 above. |
| REP2-069:E15 | <p><i>A commitment should be made to remove all on and above seabed infrastructure within high - very high potential spawning habitat for sandeel and herring at the time of decommissioning, to prevent permanent impacts to spawning areas within the ECC and array areas. We advise this should be secured in the DCO. Without such a commitment, the worst-case scenario should assess the impacts to spawning grounds if assets are left permanently in situ. (Also refer to Risk and Issues Log Benthic Point C27)</i></p> <p>No change. See Appendix C2.1 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | See the Applicants' response on this matter in <b>Table 2-7</b> , REP2-065:7.2 above.                 |
| REP2-069:E21 | <p><i>We disagree that if there were no significant impacts identified for potential fish prey species in the EIA assessment then there would be no significant impacts on ornithology and marine mammal receptors. NE consider that an understanding of the relative importance of the Project site as a foraging area, and potential for any impacts on localised prey abundance and distribution is critical in framing the predicted RIAA impacts that can be quantified. Further assessment is therefore needed to understand how more localised impacts (e.g localised depletion and/or reduced resilience of the wider stock) on fish and shellfish might influence prey availability for designated seabirds and mammals. The assessments should consider both direct and indirect impact pathways to sandeel and herring at a biologically relevant population scale, for both the construction and operation phases of the Projects. For herring this would be the Banks spawning component of the North Sea stock, and for sandeel the specific genetic population present in the Project area. See Annex E1 of REP-039 for further guidance.</i></p> <p>No change. We note the Applicant has contested the importance of the Dogger Bank sandbank system for prey availability and foraging species. Natural England disagrees with</p> | See the Applicants response to REP2-069: C10 above.                                                   |

| I.D.        | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | the justification provided and therefore maintains the advice provided in our Relevant Representation on this issue.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| REP2-069:F4 | <p><i>Permanent Threshold Shift (PTS) should be scoped into the Cumulative Effects Assessment. We do not agree that the mitigation outlined in the MMMP and ES is sufficient to minimise the risk of injury for all PTS impact ranges (see below). Further, due to the nature of marine mammals, mitigation cannot guarantee that no animals will be at risk of PTS.</i></p> <p>No Change. Natural England maintain our advice provided at Relevant Representations.</p>                                                                                                                                                                                                                                                                                                                                                                                                               | <p>The Applicants maintain their position regarding this matter as provided in response to RR-039: F 16 in the <b>Response to Natural England's Relevant Representations</b> [AS-048] and reiterated below:</p> <p><i>The Applicants acknowledge that with the current Maximum Design Parameters, additional mitigation measures may be needed to fully mitigate the risk of PTS. The Applicants acknowledge that there needs to be effective and appropriate mitigation measures in place to ensure no auditory injury (PTS) takes place from the Projects and is committed to this requirement. Other projects would also need effective mitigation measures in place to ensure there is no PTS, therefore with all projects using mitigation measures to eliminate PTS, there would be no potential Cumulative Effects of PTS.</i></p> <p><i>As a precautionary approach, PTS numbers were included in the population modelling for the cumulative assessment, so while not looked at individually, the potential impact has been given consideration in the significance of effect at a cumulative level.</i></p> <p><i>The Applicants are considering the use of NAS as mitigation for underwater noise, and the use of it will be dependent on the final project design and determined at the post-consent stage. NAS is being included within the Projects' procurement strategy as an optional element to allow it to be called upon should it be required based on the final design parameters.</i></p> |
| REP2-069:F6 | <p><i>The maximum predicted PTS impact range for a single pile installation is 13 km for harbour porpoise and 26 km for minke whales. These distances are too large to effectively be mitigated by Acoustic Deterrent Devices (ADDs). The Applicant needs to demonstrate how the full PTS impact range will be mitigated to ensure no injury is caused to marine mammals. Alternatively, the PTS impact range needs to be reduced to ensure ADDs can effectively deter animals from the zone of injury within 80 minutes (maximum PTS range will need to be 7.2 km for harbour porpoise and 15.6 km for minke whale). This could be achieved by reducing the maximum hammer energy in the Project envelope, or by committing to the use of NAS to reduce the sound at source.</i></p> <p>No change. See Appendix F2 of Natural England's Deadline 2 submission for further detail.</p> | See the Applicants' responses regarding NAS in <b>Table 2-11</b> , REP2-067:1 and REP2-067:3.1 above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| REP2-069:F7 | <p><i>The predicted maximum injury zone for some UXO clearance events is larger than the area for many ADDs to effectively deter marine mammals from. Provide planned ADD durations to demonstrate that the maximum injury zone for UXO clearance can be mitigated. If this is not possible, additional mitigation or methods to reduce the sound at source should be investigated.</i></p> <p>No change. See Appendix F2 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                                                                           | See the Applicants' responses regarding UXO clearance in <b>Table 2-11</b> , REP2-067:3.1 above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| REP2-069:F8 | <p><i>Natural England supports increasing the Monitoring Area (MA) to ensure it is greater than the maximum predicted impact range for PTS. Consideration should be given to how this zone can be effectively monitored to ensure all marine mammals can be detected. This may require using more marine mammal observers (MMOb) and implementing stricter limits on workable weather conditions. The MMMP should be updated as needed.</i></p> <p>No change. See Appendix F2 of Natural England's Deadline 2 submission for further detail.</p>                                                                                                                                                                                                                                                                                                                                       | <p>The Applicants provided an updated version of the <b>Outline MMMP (Revision 2)</b> [AS-100] in November 2024 which included updates to section 3.1.2 to reference that at least two MMOb (including at least one experienced and dedicated MMOb) would conduct surveys to cover the entire MA around each pile location. This updated text remains included in the latest version of the <b>Outline MMMP (Revision 3)</b> [REP2-047] submitted at Deadline 2.</p> <p>The <b>Outline MMMP (Revision 3)</b> [REP2-047] has been developed in line with the latest available guidance from the JNCC regarding minimising the risk of injury to marine mammals from any offshore activities that generate underwater noise, as noted in section 1 of the document. The final MMMPs will be developed in the pre-construction</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | period and will be based upon best available information, methodologies, industry best practice, latest scientific understanding, current guidance and detailed project design.                                                                                                                                                                                                                                                                                                     |
| REP2-069:F9  | <p><i>The Mitigation area/zone needs to be monitored for a minimum of 30 minutes prior to the ADD activation to reduce the risk of injury to marine mammals from the ADD. This should be updated in the MMMP.</i></p> <p>Issue Resolved . Natural England has reviewed the updates made to [AS-101] Outline MMMP and are satisfied this issue has been addressed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                           | The Applicants welcome Natural England's agreement on this matter.                                                                                                                                                                                                                                                                                                                                                                                                                  |
| REP2-069:F10 | <p><i>Piling should not commence (or recommence) in poor visibility or hours of darkness where Marine Mammal Observers (MMOb) cannot be used. There are limitations to Passive Acoustic Monitoring (PAM) so it should be used as well as, rather than instead of MMOb to optimise the ability to detect marine mammals and provide the best mitigation. Update Outline MMMP.</i></p> <p>No Change. Please refer to Appendix F2 regarding our comments on the updated Outline MMMP.</p>                                                                                                                                                                                                                                                                                                          | See the Applicants' responses regarding the PAM and the Outline MMMP in <b>Table 2-11</b> , REP2-067:2.1 above.                                                                                                                                                                                                                                                                                                                                                                     |
| REP2-069:F11 | <p><i>Natural England does not agree that the mitigated impacts of Permanent Threshold Shift (PTS) from piling are minor adverse - negligible for all marine mammals (See F5-F7). These conclusions are hinged on mitigation outlined in the MMMP which is not currently sufficient to fully mitigate the predicted PTS impacts.</i></p> <p><i>To ensure the impacts from underwater noise caused by piling are reduced for marine mammals we advise that the sound is reduced at source, this could be by modifying the design envelope (e.g. reducing the maximum hammer energy) or by using Noise Abatement Systems.</i></p> <p>No change. See Appendix F2 of Natural England's Deadline 2 submission for further detail.</p>                                                                | <p>The Applicants note that the final hammer energies for the Projects, in addition to final soft-start parameters, will be confirmed in the final MMMP for the Projects once the final foundation design and parameters are chosen. The lowest required hammer energies for the chosen design will be utilised.</p> <p>For further information, see the Applicants' responses regarding the hammer energies and NAS in <b>Table 2-11</b>, REP2-067:2.2 and REP2-067:3.1 above.</p> |
| REP2-069:F13 | <p><i>The number of Harbour porpoise potentially disturbed during single piling at DBS East, DBS West and both projects together is high, with up to 12.53% of the North Sea Management Unit (MU) disturbed. We consider this should result in a Major Adverse impact score. The Applicant has concluded minor adverse based on the results of iPCoD modelling alone. The EIA assessment should be updated based on the highest predicted impact values, for all receptors and pathways (not using iPCoD). Where a significant impact cannot be ruled out, the mitigation hierarchy should be explored to reduce the potential impacts.</i></p> <p>No Change. Please refer to Appendix F2 for detailed comments regarding Interim Population Consequences of Disturbance (iPCoD) Modelling.</p> | See the Applicants' responses regarding iPCoD modelling in <b>Table 2-11</b> , REP2-067:4.                                                                                                                                                                                                                                                                                                                                                                                          |
| REP2-069:F14 | <p><i>The number of grey seals disturbed during single piling at DBS East, DBS West and both projects together is high, with up to 30.62% of the South-East England MU disturbed. Using the number of animals potentially disturbed, the magnitude of impact is high, resulting in an impact score of moderate (significant). The EIA assessment should be updated based on the highest predicted impact values. Where a significant impact cannot be ruled out, the mitigation hierarchy should be explored to reduce the potential impacts.</i></p>                                                                                                                                                                                                                                           | See the Applicants' responses regarding iPCoD modelling in <b>Table 2-11</b> , REP2-067:4.                                                                                                                                                                                                                                                                                                                                                                                          |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | No Change. Please refer to Appendix F2 for detailed comments regarding Interim Population Consequences of Disturbance (iPCoD) Modelling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| REP2-069:F17 | <p><i>The conclusions for the RIAA illustrate that the noise thresholds for the SNS SAC would be significantly breached by the Project in combination with other noisy activities. Additional mitigation will be needed to avoid an Adverse Effect on Site Integrity (AEol), however the current approach to implementing Site Integrity Plans (SIPs) for piling impacts to the Southern North Sea SAC does not allow sufficient time for mitigation methods, such as NAS, to be procured by the Applicant prior to construction should they be required. We strongly advise that the Applicant commit to the use of specific mitigation measures including noise abatement in the Outline SIP and MMMP at this stage. We advise that the effect of noise abatement systems in reducing noise impacts should be included in the submitted assessments.</i></p> <p>No Change. Please refer to Appendix F2 for detailed comments regarding the Draft In Principle Site Integrity Plan for the Southern North Sea SAC.</p> | <p>The <b>In Principle Site Integrity Plan (SIP) for the Southern North Sea (SNS) Special Area of Conservation (SAC) (Revision 3)</b> [REP2-049] and <b>Outline Marine Mammal Mitigation Protocol (MMMP) (Revision 3)</b> [REP2-047] were updated at Deadline 2 to state that the Projects will utilise best endeavours to deliver noise reductions, where applicable, through the use of primary and/or secondary noise reduction based on the final project design, which is in line with the guidance within the Defra Marine Noise Package.</p> <p>Noise reduction systems, such as NAS, are being included within the Projects' procurement strategy as an optional element to allow it to be called upon should it be required based on the final design parameters. As noise reduction systems will be an optional element within any contracts placed, this will ensure there is sufficient time for any mitigation to be procured post-consent should they be required. Hence, procurement related issues should not represent a barrier to the use of a noise reduction system should it be required.</p> <p>It is noted that the latest Defra Marine Noise Package does not require a commitment to any specific NAS measure to be made at pre-consent stage of a project, i.e. the current stage of the Projects, only that use of NAS is considered at the earliest possible opportunity in a project's development. As such, the Applicants consider that the Projects are currently adhering to the latest guidance on NAS through their inclusion Projects' procurement strategy.</p> <p>Updated Project effects and reductions from any primary and / or secondary mitigation measures will be presented for the Projects alone, and in-combination assessments, in the final SIP for the SNS SAC post consent when the final design is confirmed and appropriate information for other projects is available.</p>                                                                                                                                                                                                                                                                                                                                                                                          |
| REP2-069:F20 | <p><i>Indirect Effects - We disagree that it can be concluded that there is no risk of AEol to marine mammal SAC features as a result of impacts on prey species, solely due to impacts being ruled out at EIA scale. Consideration has also only been given to temporary construction impacts on prey in the RIAA, rather than the indirect effects of permanent spawning habitat loss that will also occur. Please see Appendix E for our detailed comments on the indirect effects assessment.</i></p> <p>No Change. We note the Applicant has contested the importance of the Dogger Bank sandbank system for prey availability and foraging species. Natural England disagrees with the justification provided and therefore maintains the advice provided in our Relevant Representation on this issue.</p>                                                                                                                                                                                                       | <p>Note that if the Applicants assigned prey species in the EIA as high value and high sensitivity, the significance of effect for the assessment of all impacts would be minor adverse, which is not significant in EIA terms. This is due to the negligible magnitude of impacts (e.g. 0.018% of the medium to high potential habitat for sandeel of the SAC for habitat loss and 0.23% of the medium to high potential habitat for sandeel of the SAC for disturbance). There would be no change to the assessment conclusions if the sensitivity was increased.</p> <p>The Applicants reiterate that the value of the Dogger Bank as an Annex 1 feature rather than simply its biotopes is considered within the <b>RIAA HRA Part 2 of 4 – Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)</b> [AS-051].</p> <p>The Applicants do not contest that the Dogger Bank is a foraging area for mobile species, but seek to highlight that it is not the <i>only</i> foraging area for these species. Therefore, when considering effects on foraging for mobile species the SAC boundary is less relevant and foraging should be seen in the wider regional context, hence the approach taken.</p> <p>The supporting role of benthic habitats and fish and shellfish for other features is considered within the <b>RIAA HRA Part 3 of 4 - Annex II Marine Mammals</b> [APP-047]. The impacts are assessed within <b>Chapter 9 Benthic and Intertidal Ecology</b> [APP-085] and <b>Chapter 10 - Fish and Shellfish Ecology</b> [APP-091]) and then cross-referenced in the relevant assessments for marine mammals for all phases of the Projects (construction, operation and decommissioning). The Applicants therefore consider that the assessment is line with best practice for offshore wind assessments.</p> <p>The Applicants note that an assessment of long term habitat loss with regards to changes to prey resources (i.e. the indirect effects of permanent spawning habitat loss) was assessed in section 8.3.5.3.9.1 of the <b>RIAA HRA Part 3 of 4 - Annex II Marine Mammals</b> [APP-047] for the SNS SAC, the only SAC designated for marine mammals where habitat loss associated with the Projects would occur. The assessment concluded that would be no adverse effect on site</p> |

| I.D.         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | integrity of the SNS SAC due to minimal spatial extent any habitat loss associated with the Projects would have on the wider available spawning habitat for prey species within the SNS SAC.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| REP2-069:F21 | Whilst Natural England welcomes the Applicant updating the DCO to include the Maximum Hammer Energy, we advise that within Section 3.1.5 of the Outline MMMP [AS-101] it is clearly stated what the Applicant's intentions are regarding the commencing hammer energy in addition to the percentage of the maximum hammer energy this represents.                                                                                                                                                                                       | See the Applicants' response regarding hammer energy in <b>Table 2-11</b> , REP2-067:2.2 above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| REP2-069:F22 | Natural England welcomes the Applicant's Scheduling of UXO clearance with other projects (Section 9.6 of Draft In Principle Site Integrity Plan) as a useful tool for minimising the area of disturbance on a particular day; however this method should be in addition to noise reducing technology as outlined in Defra's recently published Marine Noise Package. Natural England will provide further comment following the Applicant's review of the Defra Noise Package documents and updated assessment and mitigation measures. | <p>The Applicants acknowledge the policy and guidance published on the 21<sup>st</sup> January 2025. The Applicants have reviewed these documents and appropriate measures and references to the policy and guidance have been added to the <b>Outline MMMP (Revision 3)</b> [REP2-047] and the <b>In Principle SIP for the SNS SAC (Revision 3)</b> [REP2-049] which were submitted at Deadline 2.</p> <p>The Applicants are committed to using low order techniques as the default clearance method, which is in line with the guidance within the Defra Marine Noise Package, if clearance is required.</p> |

## 2.4.6 Offshore Ornithology

Table 2-13 The Applicants' Response to Natural England's Advice on Offshore Ornithology [AS-159]

| I.D.    | Ref | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Recommendation | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| Summary |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1.1     | N/A | <p>Natural England acknowledge and welcome the significant efforts made by the Applicant to address concerns raised in our Relevant Representation and provide an assessment that is in line with SNCB advice. We consider that considerable progress has been made across the assessment, as reflected in the number of Green and Yellow rows in our detailed comments, and a large proportion of issues are now resolved. Whilst some outstanding methodological issues remain, which does prevent Natural England providing advice on EIA and HRA conclusions at this time, we consider these issues are easily resolvable within Examination timeframes.</p> <p>Given the scale of the updates that have been made, Natural England have provided our comments in the same format as our original Relevant and Written Representation. A summary of our outstanding concerns in relation to Offshore Ornithology is set out in Table 1. Our detailed advice and recommendations are presented in Table 2. For clarity, we have included the point reference values from both our Risk and Issues log ('R&amp;I Ref') and our original Relevant Rep ('Rel Rep Ref') in Table 2 to allow previously raised issues to be tracked.</p> | N/A            | N/A  | <p>The Applicants welcome Natural England's agreement that most issues are easily resolvable within Examination timeframes. The Applicants will endeavour to address any final comments via responses below or in further updates, as appropriate.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1.2     |     | <p>We note that within the revised assessment and the Applicant's Deadline 2 cover letter [REP2-001], the Applicant continues to refer to Natural England's and wider SNCB advice on both methodology and interpretation of results as "overly precautionary" or not based in evidence, whilst the Applicant's preferred methods and outputs are characterised as "evidence-based". We again highlight that the SNCB approach is no less evidence-led than that of the Applicant. It is simply a different interpretation of the same evidence, and one which takes account of the evidence-poor, high-uncertainty environment within which the assessments are carried out, as well as the requirements of the Habitats Regulations. Ultimately this is a matter of ecological judgment and given Natural England's role as the appropriate national conservation body, considerable weight ought to be given to its advice and there should be cogent and compelling reasons for departing from it.</p> <p>Natural England note that our current Best Practice Advice remains unchanged, and whilst updates are planned for publication at the end of March, these will not change any aspects currently under</p>                   | N/A            | N/A  | <p>The Applicants continue to consider that while individual elements of precaution are appropriate, the overall position adopted by Natural England through the combination of these elements remains highly precautionary.</p> <p>Natural England state that their role as statutory advisor lends 'considerable weight' to their position on disputed matters of ecology. The Applicants agree that Natural England's ornithological advisors are experts on seabird ecology. However, in addition to ecological expertise, the Applicants submit that a statistical appreciation of how to treat and combine uncertainty from multiple sources must be employed in order to ensure a proportionate approach to precaution. Natural England has often defended their position on matters of uncertainty (and hence the need for precaution) by detailing the reasons for selecting upper estimates (e.g. upper 95% confidence intervals) for individual elements of the assessment. Consideration of individual aspects of uncertainty in this manner is reasonable when focusing on elements in isolation. Combining these across independent aspects without acknowledging that the results become increasingly improbable with each addition of a precautionary value is unreasonable and not scientifically justified.</p> |

| I.D. | Ref | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Recommendation                                                                                                                                                                                                                                                    | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|      |     | <p>contention and no action will be required by projects currently in Examination as regards offshore ornithology. We are concerned that a prolonged debate about the Best Practice Advice could distract the Examination from focussing on the readily addressed outstanding issues with the Applicant's offshore ornithology impact assessment. We also note that whilst agreement between the Applicant and SNCB is desirable, it is not essential provided the Examiners and ultimately the Secretary of State have assessments according to each approach where disagreements exist, so they can take a view on the most appropriate outputs to base their assessments on. Whilst we would like to continue working towards agreement with the Applicant, we consider it unlikely that any further rationale provided on our Best Practice Advice will lead to a material change in the Applicant's position. However, should the Examiners require any further information to inform their understanding, we would be happy to provide this in response to Examiner's Questions.</p> |                                                                                                                                                                                                                                                                   |      | <p>A balanced approach to treatment of multiple sources of uncertainty is to combine central values (e.g. mean, median, etc.) or their probability distributions, such that the ranges are preserved, and then assess the full range of outcomes for the final result, which in the case of an ornithology assessment would often be the results from a PVA.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| G1   | N/A | <p>Consideration of additional mitigation</p> <p>Natural England advised in our Relevant Representations that further consideration should be given to potential measures to reduce impacts, given the scale of the predicted impacts of the projects on seabird features. Based on the current impact assessment, Dogger Bank South is predicted to have the highest impacts on FFC SPA kittiwake of all projects in English waters to date, according to both the Applicant's and Natural England's advised approach. We note that the Applicant has not currently committed to further mitigation measures.</p> <p>Given the large numbers of seabirds recorded in the baseline surveys and the potential levels of connectivity with FFC SPA in particular, we consider this is to be a critical step for Habitats Regulations purposes</p>                                                                                                                                                                                                                                            | <p>Natural England continue to advise that further consideration is given to potential mitigation measures to reduce impacts on seabird features, such as array reductions, changes to design and layout of arrays, or increasing the hub height of turbines.</p> |      | <p>The Applicants acknowledge Natural England's comment regarding the impacts on Flamborough and Filey Coast (FFC) SPA kittiwake. Mitigation relating to air gaps has been applied in accordance with the Round 4 plan level Habitats Regulation Assessment (The Crown Estate 2022) whereby, to reduce potential collisions with birds in flight (particularly kittiwakes), the clearance of the blades above the water was set at a minimum 34m above MSL. This mitigation measure was committed to by the Applicants early in the strategic compensation process and has been adhered to within the design envelopes of the Projects.</p> <p>The Applicants continued and are continuing to review the consenting, technical and commercial feasibility of increasing the minimum air gap throughout the pre-application and examination phases. The Applicants note that whilst increasing the lower blade tip clearance to minimise ornithological impact naturally leads to an increase to the upper tip height, this also has a consequential increase in the risk of impact on air defence radars which must equally be taken into consideration. The Applicants have submitted an <b>Ornithological Mitigation Option Report</b> [AS-118] which considers the feasibility of increasing the air gap/hub height. The conclusion of this work is that increasing the air gap beyond 34m is not currently feasible due to the increased consenting, engineering, and financial risks to such an extent as to make the Projects commercially unviable. Further justification is presented in the <b>Ornithological Mitigation Option Report</b> [AS-118].</p> <p>As part of the progression of project design from the PEIR to the application stage the Array Area boundaries were reduced and refined. A number of factors, including bird distribution data, were considered as part of the boundary refinement exercise. Density mapping based on the site-specific</p> |

| I.D. | Ref | Comment                                                                                                                                                                                                                                                                                                                                                                                                                     | Recommendation                                                                                                                                                                                                | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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|      |     |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                               |      | <p>aerial survey data was collated and examined to indicate areas within The Crown Estate lease options that showed higher and lower densities of birds, and this was used alongside other environmental and technical information to enact the boundary change. An outline of the factors considered in the boundary refinement exercise was presented as part of the minutes from the ornithology ETG meeting on the 6<sup>th</sup> February 2024 (available in <b>Appendix F1 - Minutes of meetings – ETG [APP-043]</b>). The refinements to the Array Area boundaries was, therefore, undertaken to help reduce impacts on important bird populations.</p> <p>Any reductions or changes to the array design or layout must be considered against other environmental, technical, and engineering constraints, as well as benefits to ornithology. For example, the layout and site design must include requirements by MCA and Trinity House for navigational safety, including the provision of Search and Rescue lanes. Furthermore, The Crown Estate Lease requirement to meet a minimum specific power density would make further amendments to site design challenging at this stage. The Applicants must seek to achieve as close to the minimum power density of 5MW/km<sup>2</sup> in order to be competitive in the highly competitive bidding process for a Contract For Difference, without which the Projects may be delayed or not be constructed at all.</p> <p>The Applicants consider that a robust assessment has been provided and, with the exception of those SPA features for which an in-combination adverse effect on integrity has been conceded, this has demonstrated that the Projects will not have any significant or adverse effects on integrity of ornithological interests. On this basis the Applicants do not consider any additional mitigation is required.</p> |
| G2   |     | <p>In-combination and cumulative assessments</p> <p>Natural England note that the cumulative and in-combination totals presented for several species do not align with the most recently agreed figures as presented at Sheringham &amp; Dudgeon Extensions Projects (SEP &amp; DEP) (Deadline 8). For several species, the cumulative totals also do not match with the unapportioned in-combination totals presented.</p> | <p>Natural England advise that the Applicant review the cumulative and in-combination figures and correct them as necessary.</p>                                                                              |      | <p>The Applicants will review the information and update the assessment as appropriate at Deadline 4. However, in advance of this review the Applicants note that cumulative and in-combination tables often vary between applications due to differences in presentation of factors such as avoidance rates, and these are often explained in the accompanying text. Furthermore, the Applicants are of the opinion that revising these tables will have no material effects on the assessment conclusions and note Natural England has made no suggestion to the contrary. So these aspects should not be the cause of any delay in Natural England finalising their position on the applications' impacts on ornithological interests.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| G3   |     | <p>Scenarios for displacement impacts on auks in PVAs.</p> <p>Natural England note that the Population Viability Analyses (PVAs) run for impacts on guillemot and razorbill do not include the full range of displacement and mortality rates, as advised by Natural England. We note that the highest combination of rates included is 70% displacement and 2% mortality. Though we recognise that</p>                     | <p>Natural England advise that the PVAs run to assess the predicted impacts of the projects on guillemot and razorbill populations encompass the full range of Natural England's advised displacement and</p> |      | <p>The Applicants consider there is little insight gained from running PVA on what is clearly a highly precautionary and improbably high impact magnitude (70% / 10%). Nevertheless, these PVA will be provided at Deadline 4.</p> <p>The Applicants will review the PVA for auks at EIA scale and provide an update at Deadline 4. However, in advance of providing these additional</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

| I.D. | Ref | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Recommendation                                                                                                                                                                                                                                                                                                                                                                            | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|      |     | consent decisions to date have been based on 70% displacement and 2% mortality values, and that 70% and 10% represent an extreme worse-case scenario, the exclusion of the upper end of Natural England's advised range of displacement and mortality rates (70% and 10%) means that the full range of possible impact levels has not been captured by the PVAs undertaken.<br><br>Further, we note that a PVA has not been run for FFC SPA razorbill for the proposal alone, nor guillemot at the EIA scale, despite the potential impacts exceeding 1% of baseline mortality. | mortality rates, to ensure that the full range of possible impact levels is considered.                                                                                                                                                                                                                                                                                                   |      | scenarios in the PVA the Applicants note that the provision of these will not make a material difference to the conclusions, since they cover either extreme worst case options (Natural England's definition) or ones for which the results will not materially affect Natural England's conclusions (e.g. guillemot EIA cumulative or razorbill FFC SPA alone). So these aspects should not be the cause of any delay in Natural England finalising their position on the applications' impacts on ornithological interests.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| G4   |     | Cumulative Displacement Impacts on Auks<br><br>The spatial distribution figures provided in 7.12.12.10 show that high densities of auks (particularly guillemot and razorbill) were recorded in the area between the two arrays, but outside the 2km buffer. It is likely that birds in this area will be vulnerable to cumulative displacement impacts from the arrays on either side. We note that the Applicant has not included an assessment of the cumulative impacts of displacement on auks in the area between the arrays, as previously requested by Natural England. | Natural England continue to advise that the Applicant should provide an assessment of cumulative displacement impacts on auks between the arrays.                                                                                                                                                                                                                                         |      | The Applicants have provided a response to this point below at R&I ref: G12 and RR ref: G22.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| G5   |     | PVA results<br><br>Natural England note that the results of several of the PVAs undertaken by the Applicant are not as we would expect. For example, the results of some PVAs appear to differ significantly from the results of PVAs run by SEP&DEP for very similar impact values. The details of the PVA parameters used have not been updated to reflect the changes to the impact values in the assessment, which means it therefore has not been possible for Natural England to assess why these differences might have arisen.                                          | Natural England advise that the Applicant check the results of all PVA scenarios run for the assessment. We request that the inputs and outputs for all PVA scenarios are clearly presented so that we can fully understand and assess the specification and parametrisation of the models. We advise that this should include presenting the log files for all PVA scenarios undertaken. |      | The Applicants have reviewed the DEP and SEP PVA and consider that there are several probable reasons that different results were obtained. The starting population size used by DEP and SEP for FFC guillemot was 121,754 adults, while for DBS a value of 149,978 was used, more than 20% higher. The DEP and SEP figure was from the previous count in 2016 (which was the latest count at that time), while the one used for DBS was from 2022 (Clarkson <i>et al.</i> , 2022 <sup>33</sup> ). The Applicants consider that this is a substantial difference between the two models which is more than enough to account for the difference in the two PVA. However, in addition the results reported by DEP and SEP were for a period of 40 years while those for DBS are for a period of 35 years.<br><br>It is a very similar situation for razorbill, although the relative difference in population size between that used by DEP and SEP (40,506 adults) and DBS (61,345) is even greater (50% higher). Again, these counts represent those from 2016 and 2022 (Clarkson <i>et al.</i> , 2022 <sup>33</sup> ). The same difference duration of PVA also applies to razorbill (40 years for DEP and SEP and 35 years for DBS).<br><br>Unfortunately, unlike DBS, the DEP and SEP submission does not provide the full tables of input parameters so it is not possible for the Applicants to investigate if there are any other sources of difference between the two PVA reports, such as the productivity rates noted by Natural England. |

<sup>33</sup> Clarkson, K., Aitken, D., Cope, R., & O'Hara, D. (2022) Flamborough and Filey Coast SPA seabird colony count 2022. RSPB, The Lodge, Sandy, Bedfordshire SG19 2DL

| I.D.                                                                    | Ref                                                                            | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Recommendation                                                                                                                                                                  | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|                                                                         |                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                 |      | Natural England is also incorrect to state that the PVA have not been updated. These were provided in Annex A: SPA PVA Results of <b>RIAA HRA Part 4 of 4– Marine Ornithological Features (Revision 3)</b> [AS-085].                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Project Parameters</b>                                               |                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                 |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Risks and Issues (R&I) ref: H5<br>Relevant Representation (RR) ref: G10 | 7.5 – Table 5-2                                                                | The minimum lower blade tip clearance has been provided as 34m to Mean Sea Level (MSL) rather than Highest Astronomical Tide (HAT). Whilst the Applicant has not updated this, we can surmise from the information presented in 10.42 Ornithological Mitigation Option Report [AS-118] that the minimum blade clearance is 32.4m above HAT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | We advise that for consistency with other projects it would be beneficial for the Project Description and/or DCO to be updated to include the value against HAT as well as MSL. |      | The Applicants confirm that the minimum blade clearance is 32.4m above HAT. The reason for stating blade tip heights with respect to MSL is that this is the sea-level datum used for seabird flight heights in the collision risk model.<br><br>The Applicants note that a variety of different datums have been used across recent offshore wind DCOs and the Applicants are not aware of any reason to favour one approach over another and therefore propose retaining MSL. The Applicants will include HAT in the next revision of <b>Chapter 5 Project Description (Revision 3)</b> [REP1-009]. |
| R&I ref: G1, G5, G6<br>RR ref: G11, G15, G16                            | 10.18 – Table 2.1.1; 7.12; 7.12.12.3 (2); 7.12.12.5 (2); 7.12.12.7 (2); 6.1(3) | Approach to calculating abundances and seasonal peak abundances for the arrays combined.<br><br>Natural England welcome that the Applicant has updated the abundance and seasonal peak abundance estimates of the arrays combined, to reflect the sum of the abundance estimates of each array.<br><br>Natural England acknowledges that the Applicant considers that their original approach was robust, however we maintain that summing the abundance estimates and displacement impacts of the two arrays is the most appropriate approach and that the Applicant's original approach under-represents impacts and does not reflect the worst-case scenario. We highlight that the Applicant has acknowledged that the arrays should be considered as NSIPs in their own right, and that if separate applications were to be submitted their impacts would be calculated separately and summed. | Issue resolved. Natural England will base our conclusions on impacts on these updated values.                                                                                   |      | The Applicants welcome Natural England's acceptance of these values calculated in accordance with Natural England's request.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Baseline Characterisation</b>                                        |                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                 |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| R&I ref: G2, G3                                                         | 7.12 – section 12.5.2                                                          | Representativeness of baseline data<br><br>Natural England welcomes changes made by the Applicant to contextualise the baseline data (7.12, section 12.5.2) via comparisons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Natural England are broadly satisfied that the baseline has been satisfactorily characterised, though we continue to note                                                       |      | The Applicants welcome Natural England's acceptance of this additional section.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| I.D.                             | Ref                        | Comment                                                                                                                                                                                                                                                                                                                   | Recommendation                                                                                                                                    | Risk | Applicants' Comment                                                                                                                                          |
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| RR ref:<br>G12,<br>G13           |                            | of Waggitt et al (2019) and other related Offshore Windfarm datasets. We acknowledge the wide range of densities across these datasets and the absence of a consistent pattern of change between the two years of baseline data collected for Dogger Bank South.                                                          | that the considerable variation between the two years of baseline data highlights the need for a precautionary approach to the assessment.        |      |                                                                                                                                                              |
| R&I ref:<br>G4<br>RR ref:<br>G14 | 6.1; 7.12 – para 59; 10.18 | Use of additional references on seabird population trends<br>Natural England welcome that the Applicant has included references to the additional sources of information on seabird population trends recommended by Natural England, notably Seabirds Count (Burnell et al 2023) and HPAI impacts (Tremlett et al 2024). | Issue largely resolved. However, we continue to disagree with the Applicant's characterisation of these trends in the RIAA (see R&I log Ref G21). |      | The Applicants acknowledge Natural England's position on these matters but note that any remaining disagreements have no material bearing on the assessment. |

#### Environmental Impact Assessment (EIA)

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| R&I ref:<br>G12<br>RR ref:<br>G22 | 7.12; 7.12.12.10;<br>10.18 – Table 2.1.1 | <p>High densities of auks between the two arrays</p> <p>The spatial distribution figures provided in 7.12.12.10 show that high densities of auks (particularly guillemot and razorbill) were recorded in the area between the two arrays, but outside the 2km buffer. Natural England consider it is likely that birds in this area will be vulnerable to cumulative displacement impacts from the arrays on either side and therefore advised that the Applicant should provide an assessment of cumulative displacement impacts on auks between the arrays.</p> <p>We note that this assessment has not been provided, and that the Applicant cites Trinder et al (2024)<sup>34</sup> as evidence that auks are not displaced beyond the 2km buffer.</p> <p>Natural England do not agree that the Trinder et al (2024) paper provides evidence that auks are not displaced by offshore windfarms, as this study focuses on the behaviour of birds within-array (i.e. on the proportion of birds that are not displaced) and does not attempt to quantify a displacement rate for auks with respect to the array and buffer.</p> <p>Natural England highlight the recently published paper by Peschko et al (2024)<sup>35</sup>, which demonstrates cumulative displacement impacts on guillemot up to 21km from offshore wind farms. Furthermore, a recent review of the evidence on displacement by offshore wind farms (Lamb et al 2024)<sup>36</sup> found that "effects of offshore wind energy development on marine birds extend well beyond the</p> | Natural England maintain our previous advice that further assessment is needed of cumulative displacement impacts on auks between the arrays. |  | <p>The Applicants maintain their position that the suggestion from Natural England that the assessment should consider displacement of auks beyond the advised 2km buffer is unprecedented and unwarranted. There is no additional reason why birds in this region would be subject to displacement any more than those located around all other wind farm boundaries.</p> <p>Natural England had stated that Trinder <i>et al.</i> (2024) is not an appropriate source of evidence on auk displacement as it focuses on within wind farm effects. While it is correct that the novel feature of this study was the investigation of responses to turbines, it is incorrect to state that the study did not consider, analyse or discuss displacement beyond the wind farm. Section 2.3 of Trinder <i>et al.</i> (2024) describes the spatial modelling methods used to investigate large scale redistribution effects (i.e. those across the whole study area which extended more than 10km from the wind farm boundary in some directions) and section 3.1.2 presents the results of these analyses. This analysis found that of the five species considered, only gannet presented a clear and consistent pattern of avoidance of the wind farm. The other four (guillemot, razorbill, puffin and kittiwake) showed no consistent evidence of displacement from the wind farm. When these results are considered alongside the absence of any apparent displacement responses to the turbines (section 3.2) it is clear that the study, conducted over two breeding seasons, makes a strong case for there having been no detectable displacement from the wind farm for these four species. It is therefore inappropriate of Natural England to dismiss the findings of this study on these grounds that it is not informative about displacement from the wind farm. While it is correct that Trinder <i>et al.</i> (2024) does not attempt to</p> |
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<sup>34</sup> Trinder, M., O'Brien, S.H. and Deimel, J., (2024). A new method for quantifying redistribution of seabirds within operational offshore wind farms finds no evidence of within-wind farm displacement. *Frontiers in Marine Science*, 11, p.1235061.

<sup>35</sup> Peschko, V., Schwemmer, H., Mercker, M., Markones, N., Borkenhagen, K. and Garthe, S., 2024. Cumulative effects of offshore wind farms on common guillemots (*Uria aalge*) in the southern North Sea-climate versus biodiversity?. *Biodiversity and Conservation*, 33(3), pp.949-970.

<sup>36</sup> Lamb, J., Gulka, J., Adams, E., Cook, A. and Williams, K.A., 2024. A synthetic analysis of post-construction displacement and attraction of marine birds at offshore wind energy installations. *Environmental Impact Assessment Review*, 108, p.107611.

| I.D. | Ref | Comment                                                                            | Recommendation | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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|      |     | immediate surroundings of the wind farms” and recommended that buffer zones of 4km |                |      | <p>quantify a displacement rate from the wind farm or buffer, it is clear from the results presented that the rate is zero.</p> <p>As Natural England note elsewhere in their comments (R&amp;I ref: G2,G3), there was considerable variation between the two years of baseline data. This is a common feature of wind farm baseline data and seabird surveys generally; seabird distributions are highly variable through time. The Trinder <i>et al.</i> (2024) study was specifically designed as a robust method for investigating displacement that was not subject to the confounding problems of natural variations.</p> <p>The Peschko <i>et al.</i> (2024) study was conducted using data collected in the German North Sea during the nonbreeding season, in contrast with the Trinder <i>et al.</i> (2024) study which was conducted in the breeding season. The different results may therefore reflect variable responses at different times of year. However, Szostek <i>et al.</i> (2024) analysed the same dataset used by Peschko <i>et al.</i> (2024) and obtained different results: in autumn guillemot were estimated to avoid the wind farms by up to 6-12km while in winter this was 0.4-2km. Furthermore, there are aspects of the German studies which may have influenced both analyses. The wind farms present are primarily earlier generation ones, with smaller, more closely spaced turbines than are under consideration at DBS. The wind farms are also mainly distributed around the periphery of German waters with central areas free of wind farms, thus the survey data collection does not extend equally in all directions around them (i.e. areas beyond German waters are under represented). There is a possibility that this has influenced the results obtained and given greater emphasis to the central areas. A curious aspect of the Peschko <i>et al.</i> (2024) study is also the similarity in their results for guillemot with that from a previous study by the same research group on red-throated diver, conducted in the same area (Garthe <i>et al.</i> 2023<sup>37</sup>). Figure 4 from each of these papers, one for guillemot, one for red-throated diver show remarkably similar patterns of apparent wind farm avoidance. This is surprising as no previous study has suggested these two species respond to the same extent to wind farms (red-throated diver are considered to be a much more sensitive species, as observed in their responses to anthropogenic disturbance generally). It is unclear why this similarity has been found, but it suggests that the study site and analysis methods may have influenced the results.</p> <p>Natural England have also cited a review of wind farm studies (Lamb <i>et al.</i> 2024) as providing evidence of displacement. While this review and analysis was comprehensive and robust in itself, it is almost wholly reliant on the robustness of past studies of between year distribution changes. But, as Natural England has noted, these distributions change from one year to the next without any wind farm effects. Thus, the results reported by Lamb <i>et al.</i></p> |

| I.D.                             | Ref                          | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Recommendation                                                                                                                                            | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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|                                  |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                           |      | <p>(2024) are similarly reliant on individual studies which share the same problem: they all compare distributions between years, and these are an unreliable basis for understanding wind farm effects. Notably Zuur <i>et al.</i> (2018) attempted to analyse the data from some of the studies included in Lamb <i>et al.</i> (2024), and found that they lacked sufficient statistical power to permit detection of changes.</p> <p>These studies were conducted using boat-based survey methods which are now almost completely replaced by digital aerial methods, at least in part because seabirds respond to the survey vessel, influencing the results. It is also clear from the map of wind farm locations (Fig 1 of Lamb <i>et al.</i> 2024) that the included studies were predominantly conducted at small scale, early generation wind farms with closely spaced turbines, located in coastal waters of the SNS. These wind farms are not representative of the current rounds of wind farms, not least as there are many fewer seabird breeding colonies in the southern North Sea close to these wind farms so most data for species such as auks will be for the nonbreeding seasons. During these periods seabirds are under very different constraints than in the breeding season and it is therefore highly likely that any responses would also be different at this time.</p> <p>All these factors taken together (limited statistical power, superseded survey methods, nonbreeding locations, small scale inshore wind farms) mean that the results in Lamb <i>et al.</i> (2024) should be considered as being of reduced applicability for assessing auk displacement in the current context.</p> |
| R&I ref:<br>G8<br>RR ref:<br>G18 | 7.12 – section 12.9          | Decommissioning displacement<br><br>Natural England acknowledge that the Applicant has considered displacement impacts during decommissioning in Chapter 7.12, Section 12.9. However, these impacts are not specifically quantified, as they have been for construction displacement impacts. While Natural England accept that these figures are not included in operational annual impact assessment figures or PVAs for the project, we note that this is a source of under-precaution in the assessment. | Natural England advise that it would be beneficial for decommissioning impacts to be explicitly quantified in the assessment as for construction impacts. |      | The Applicants could undertake a copy-paste exercise of the construction impacts, rebadging them as decommissioning impacts, but this would be of no benefit to the assessment and is considered unnecessary. The Applicants disagree with Natural England's statement that not including the full text in relation to decommissioning impacts represents under-precaution in the assessment. Since decommissioning is predicted to have an impact no greater than construction (and this is not disputed by Natural England) and it has been demonstrated that construction impacts will not result in significant effects or adverse effects on integrity it is clear that there is no material effect on the assessment conclusions from not presenting the full text in the decommissioning assessment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| R&I ref:<br>G9<br>RR ref:<br>G19 | 7.12;<br>10.18 – Table 2.1.1 | EIA baseline mortality rates and reference populations<br><br>Natural England acknowledge and welcome that the Applicant has updated EIA baseline mortality rates and reference populations to reflect our advice.                                                                                                                                                                                                                                                                                           | Issue resolved. No action needed.                                                                                                                         |      | The Applicants welcome Natural England's agreement on this matter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| R&I ref:                         | 7.12                         | Displacement impacts on arrays combined                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Issue resolved. No action needed.                                                                                                                         |      | The Applicants welcome Natural England's agreement on this matter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| I.D.                              | Ref                      | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| G11<br>RR ref:<br>G21             |                          | <p>Natural England welcome that the Applicant has updated the displacement impact assessment for the arrays combined to reflect the sum of the impacts of each array.</p> <p>While we note that the Applicant considers their original approach to have been robust, Natural England consider that the updated values more accurately represent impacts of the arrays combined. We note that our conclusions on impacts will be based on these updated values.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| R&I ref:<br>G53                   | 6.1; 7.12;<br>7.12.12.12 | <p>Presentation of displacement matrices including upper and lower confidence intervals</p> <p>Natural England highlight that whilst the Applicant has updated their displacement assessment for the arrays combined in ES Chapter 12 – Offshore Ornithology (Revision 2) [AS-057], the relevant tables in Appendix 12-12 [APP-115] have not been updated. This means that the displacement matrices including upper and lower confidence intervals for the arrays combined are not presented.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Natural England advise that ES Appendix 12-12 [APP-115] is updated in due course to reflect the updated displacement assessment figures and that all displacement matrices are presented, including for the upper and lower confidence intervals.                                                                                                                                                                                                                                                                                                              |      | <p>As stated by the Applicants in their <b>Response to Natural England's Relevant Representations (Appendix G &amp; H)</b> [PDB-006]:</p> <p><i>While the mean estimates for East and West can be summed to obtain the combined total, and an updated assessment will be provided mid-November 2024 using this approach (as Natural England has requested), it remains the case that the measures of uncertainty (SD and 95% c.i.) are more robustly obtained from the combined analysis rather than the sum of the individual values for East and West.</i></p> <p>Thus, since it is not appropriate to sum the 95% confidence interval estimates, the original estimates (e.g. as presented in Technical <b>Appendix 12-5a-c - Seasonal Peak Abundance (All, Sitting, Flying)</b> (Revision 2) [AS-064]) are unchanged and the displacement matrices in Appendix 12-12 <b>Seasonal Displacement Matrices Upper Lower C.I. Abundance</b> [APP-115] remain valid and there is no need to update these matrices.</p> |
| R&I ref:<br>G15<br>RR ref:<br>G25 | 7.12                     | <p>Appropriate displacement and mortality rates for auks and characterisation of Natural England's advice</p> <p>Whilst the Applicant has presented the results of the displacement assessment for auks using Natural England's advised ranges for displacement (30%-70%) and mortality rates (1%-10%), they have consistently advocated for the application of 50% displacement and 1% mortality rates. The Applicant consistently characterises their preferred rates as being more realistic and evidence-based than Natural England's advised range and have used these preferred rates in their assessment of the significance of impacts. We also note that in their response to our Relevant Representations [PDB-006], the Applicant continues to claim that their preferred rates of 50% displacement and 1% mortality are precautionary and cite Trinder et al (2024) as evidence of low levels of displacement of auks.</p> <p>Natural England do not agree that the Trinder et al (2024)<sup>1</sup> paper provides sufficient evidence that auks are not displaced by offshore windfarms, as this study focuses on the behaviour of birds within-array (i.e. on the proportion of birds that are not displaced) and does not attempt to quantify a displacement rate for auks with respect to</p> | <p>No change.</p> <p>Natural England anticipate that the forthcoming Offshore Renewables Joint Industry Programme (ORJIP) project 'Improving understanding of distributional change for relevant seabird species (ImpUDis)' will provide a comprehensive overview of auk displacement. Until this project returns evidence which can inform displacement rates of auks, Natural England continue to advise the use of the displacement matrix set out in our Best Practice Guidance and will base our conclusions on impacts calculated using these rates.</p> |      | <p>As noted by the Applicants above (R&amp;I ref: G12 RR ref: G22), Natural England is incorrect in their statement that Trinder <i>et al.</i> (2024) does not consider distributional changes beyond the wind farm. Furthermore in the response to R&amp;I ref: G12 RR ref: G22, the Applicants have presented several reasons why the data included in the Lamb <i>et al.</i> (2024) review of wind farm studies may be unreliable and unrepresentative for the current context. For these reasons the Applicants continue to consider displacement and mortality rates of 50% and 1%, respectively, as appropriate and precautionary.</p>                                                                                                                                                                                                                                                                                                                                                                        |

| I.D.                              | Ref                       | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|                                   |                           | the array and buffer. We also note that the results of a recent review of the evidence on displacement by offshore wind farms (Lamb et al 2024) further supports our position that basing impact assessments on a single rate of 50% displacement is not appropriate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| R&I ref:<br>G16<br>RR ref:<br>G26 | 7.12                      | <p>Gannet collision</p> <p>Natural England welcome that the Applicant has updated their gannet collision risk assessment in accordance with Natural England's advice to include a range of macro-avoidance rates between 65% and 85%.</p> <p>We note that the updated assessment still uses single avoidance rates calculated by the Applicant rather than following Natural England's advice to apply a macro-avoidance rate along with an avoidance rate of 99.3%. However, we note that this will likely not make a material difference</p>                                                                                                                                                                                                                                                                                                                                                 | Issue resolved. No action needed.                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      | The Applicants welcome agreement with Natural England on this matter. However, the Applicants wish to clarify that the approach taken will make <u>no</u> change to the results. This is because the collision estimation is in large part obtained by multiplying several values together. The order in which this is conducted (e.g. $a \times b \times c = c \times a \times b$ ) has <u>no</u> effect on the results obtained.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| R&I ref:<br>G17<br>RR ref:<br>G27 | 7.12 - section 12.10.3    | <p>Cumulative assessment for impacts on red-throated diver</p> <p>Natural England welcome that the Applicant has included a cumulative assessment for impacts on red-throated diver. However, the figures presented in this assessment do not align with the most recently agreed cumulative figures from the SEP&amp;DEP Examination (See Natural England's Response to Deadline 8 [REP8-102]<sup>38</sup>).</p> <p>SEP&amp;DEP presented a cumulative displacement impact for red-throated diver of between 32 and 318 birds, representing an increase in BDMPS baseline mortality of 1.10-10.5%. By contrast, the figures presented by the Applicant suggest a maximum of 6.6 birds.</p> <p>We highlight that it has been Natural England's long-standing position that significant adverse effects at the EIA scale could not be ruled out for this species due to cumulative impacts.</p> | <p>Natural England recommends that the Applicant revisit the figures presented in their cumulative assessment and clarify how they have been arrived at. We refer the Applicant to the figures presented during the SEP&amp;DEP examination [[REP8-102] as a useful reference point.</p> <p>We advise that these figures should be presented with an appropriate range of mortality rates between 1 and 10% for array displacement, in accordance with Natural England's standard advice.</p> |      | <p>The Applicants will review the assessment and those presented in the SEP &amp; DEP examination and provide an updated assessment if appropriate at Deadline 4. However, in advance of undertaking this review, the Applicants note that Natural England has already stated their position on this matter (<i>long-standing position that significant adverse effects at the EIA scale could not be ruled out for this species due to cumulative impacts</i>) and therefore any revision to this assessment will have no material effect on their conclusions. So this aspect should not be the cause of any delay in Natural England finalising their position on the applications' impacts on ornithological interests.</p> <p>The Applicants also note that Natural England appears to have mistakenly made reference to the array in their recommendations (<i>appropriate range of mortality rates between 1 and 10% for <u>array</u> displacement</i>). The Applicants note that the Array Areas are far beyond the coastal waters favoured by this species, and only one individual was recorded during the 24 baseline surveys (in May, in flight through the 4km buffer of DBS West). Therefore the Applicants consider this reference to the Array Areas has been made in error, and that Natural England's focus is on the potential impacts to this species which may occur in coastal waters (i.e. the cable route and vessel routes).</p> |
| R&I ref:<br>G54                   | 7.12 – section 12.10; 6.1 | <p>Cumulative and in-combination totals</p> <p>Natural England note that the cumulative impact totals presented in 7.12 ES Chapter 12 [AS-058] and the unapportioned in-combination</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Natural England advise the Applicant to check the cumulative and in-combination totals for all species to ensure their accuracy, and to clarify any remaining discrepancies                                                                                                                                                                                                                                                                                                                   |      | The collision estimates in these tables reflect different collision avoidance rates that have been applied in the past. The title for table 12-99 of <b>Chapter 12 Offshore Ornithology (Revision 2)</b> [AS-058] states that the collisions are presented using the older avoidance rate of 98.9% unless otherwise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

<sup>38</sup> [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010109/EN010109-002129-Natural England - Other- EN010109 441148 SEP DEP Appendix B3 - Natural England's Offshore Ornithology Position \(Revision 2\) Deadline 8.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010109/EN010109-002129-Natural%20England%20-%20Other-EN010109_441148_SEP_DEP_Appendix_B3_-_Natural%20England's%20Offshore%20Ornithology%20Position%20(Revision%202)%20Deadline%208.pdf)

| I.D.                              | Ref                                     | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Recommendation                                                                                                                                                                                                                                                    | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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|                                   |                                         | <p>totals presented in 6.1 RIAA HRA Part 4 of 4 – Marine Ornithological Features (Revision 3) [AS-086] do not always match.</p> <p>For example, the cumulative collision impacts presented for Kittiwake in Table 12-99 of [AS-058] are 5510.7, while the unapportioned in-combination totals presented in Table 9-23 of [AS-086] are 4071.</p> <p>Natural England note that we would expect the unapportioned in-combination totals in the RIAA to be the same as the cumulative totals presented in the ES.</p>                                                                                                                                                                                                                                                                                                                                                 | between cumulative and in-combination totals.                                                                                                                                                                                                                     |      | <p>indicated (see the table footnotes) and in the text that follows the table (paragraphs 809 and 810) it is explained how the total value changes with the application of the more recently advised higher avoidance rate. In Table 9-23 of <b>6.1 RIAA HRA Part 4 of 4 – Marine Ornithological Features (Revision 3)</b> [AS-086] the collisions have been adjusted using the updated avoidance rate of 99.2%. It is acknowledged that this aspect (presentation of collision for older wind farms which used different avoidance rates) is one which can result in confusion such as here, however the figures indicated by Natural England are all correct and the associated text explains this.</p>                                                                  |
| R&I ref:<br>G55                   | 7.12 – Sections 12.10.5.3 and 12.10.5.5 | <p>Great black-backed gull and lesser black-backed gull cumulative totals</p> <p>The cumulative collision totals presented for great black-backed gull and lesser black-backed gull are lower than the cumulative totals presented at SEP &amp; DEP, despite additional impacts from several projects since the SEP&amp;DEP examination, including those of Dogger Bank South.</p> <p>The annual cumulative collision mortality presented by the Applicant for lesser black-backed gull (Table 12-100) is 597.8. The annual cumulative collision mortality presented at SEP &amp; DEP [REP8-102]<sub>4</sub> was 640.</p> <p>The annual cumulative collision mortality presented by the Applicant for great black-backed gull (Table 12-102) is 1023.2. The annual cumulative collision mortality presented at SEP &amp; DEP [REP8-102]<sub>4</sub> was 1357.</p> | Natural England advise that the Applicant check the cumulative collision impacts for great black-backed gull and lesser black-backed gull. We refer the Applicant to the figures presented during the SEP&DEP examination [REP8-102] as a useful reference point. |      | <p>The Applicants will review the cumulative collision totals for these species and provide updates at Deadline 4, if appropriate. However, in advance of this review the Applicants note that cumulative and in-combination tables often vary between applications due to differences in presentation of factors such as avoidance rates, and these are often explained in the accompanying text. Furthermore, the Applicants are of the opinion that revising these tables will have no material effects on the assessment conclusions and note Natural England has made no suggestion to the contrary. So these aspects should not be the cause of any delay in Natural England finalising their position on the applications' impacts on ornithological interests.</p> |
| R&I ref:<br>G56                   | 7.12 – Section 12.10                    | <p>Lack of PVAs for cumulative impact assessments</p> <p>The Applicant has not provided PVAs for cumulative EIA impacts, despite several of these amounting to increases in background mortality rates of over 1%, when assessed according to Natural England's advice. For example, cumulative totals presented for guillemot (7.12, para 766) amount to an increase in background mortality rate of 3.08% when applying a displacement rate of 70% and a mortality rate of 2%.</p>                                                                                                                                                                                                                                                                                                                                                                              | Natural England advises that the Applicant run PVAs to assess projected impacts on populations wherever cumulative impacts lead to increases in background mortality rate of greater than 1%, when calculated according to Natural England's advice.              |      | <p>Additional PVAs will be provided at Deadline 4 as appropriate. However, in advance of providing these additional scenarios in the PVA the Applicants note that the provision of these will not make a material difference to the assessment, since the results will not materially affect Natural England's conclusions (e.g. guillemot EIA cumulative). So these aspects should not be the cause of any delay in Natural England finalising their position on the applications' impacts on ornithological interests.</p>                                                                                                                                                                                                                                               |
| R&I ref:<br>G18<br>RR ref:<br>G28 | 7.12                                    | <p>Consideration of additional mitigation</p> <p>See G18 (G63) in HRA comments below.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | See G18 (G63) in HRA comments below.                                                                                                                                                                                                                              |      | <p>The Applicants consider that a robust assessment has been provided and this has demonstrated that the Projects will not have any effects on ornithological interests. On this basis the Applicants do not consider any additional mitigation is required.</p> <p>See response to R&amp;I ref: G18 RR ref: G36.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| I.D.                              | Ref | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                            |
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| R&I ref:<br>G19<br>RR ref:<br>G29 | N/A | <p>Whilst substantial progress has been made, outstanding concerns with aspects of the assessment need addressing before Natural England can advise on the EIA conclusions, including:</p> <ul style="list-style-type: none"> <li>Discrepancies in cumulative impact figures</li> <li>Lack of PVAs to assess cumulative impacts resulting in increases in background mortality rates of more than 1%</li> <li>Lack of assessment of cumulative displacement impacts on auks between the arrays.</li> </ul> <p>We highlight that Natural England considers that impacts on the following species are already significant at an EIA scale in the North Sea: gannet, great black-backed gull, guillemot, kittiwake, razorbill, and red-throated diver, and that this proposal will be making an addition to the cumulative totals.</p> | Natural England advise that cumulative impact figures are checked and refer the Applicant to the figures presented during the SEP & DEP Examination [REP8-102]4. We advise that PVAs are run wherever cumulative impacts lead to increases in background mortality rate of greater than 1%, when calculated according to Natural England's advice. Natural England advise that the Applicant provide an assessment of cumulative displacement impacts on auks between the arrays. |      | The Applicants will review the cumulative impact figures and provide PVAs for impacts as appropriate. The Applicants do not agree with the basis for Natural England's position on auk displacement between the arrays (see response to comment R&I ref: G12 RR ref: G22) and do not consider there to be justification for consideration of displacement beyond the standard accepted buffer distance of 2km. |

#### Habitats Regulations Assessment (HRA)

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| R&I ref:<br>G21,<br>G22,<br>G24<br>RR ref:<br>G32,<br>G33,<br>G35 | 6.1                   | <p>Calculation of adult baseline mortality of gannet, kittiwake and razorbill at FFC SPA</p> <p>Natural England welcome that the Applicant has updated the adult baseline mortality rates for gannet, kittiwake, and razorbill to reflect our advice. However, we note that the Applicant continues to refer to the Burnell et al (2023) counts as more recent than the Clarkson et al (2022) counts. For example, in Chapter 6.1, paragraph 167, the Applicant states "Clarkson et al. (2022) reported the 2022 population was 44,574 apparently occupied nests (AON), or 89,148 breeding adults, while Burnell et al. (2023) reported a small increase to 45,504 AON, 91,008 individuals" and "Natural England [REP-039] advised that the earlier population estimate should be used".</p> <p>While Burnell et al (2023) was published after Clarkson et al (2022), the counts presented in it for FFC SPA were conducted in 2017. The Clarkson et al (2022) counts were made in 2022 and are therefore more recent. The Applicant's statements regarding the timeline of these counts are therefore erroneous, and the 2022 count for Kittiwake, for example, actually represents a small decline when compared with the 2017 count presented in Burnell et al (2023).</p> | Issue largely resolved. However, we advise that the Applicant considers rewording their statements regarding the timelines of the counts presented in Burnell et al (2023) and Clarkson et al (2022), as it is currently misleading in terms of the characterisation of both seabird population trends and Natural England's advice. |  | The Applicants do not consider these comments to merit a re-submission of the RIAA and ES chapter on their own, however the Applicants will be reviewing the assessment to determine if updates are required more generally for Deadline 4 (i.e. for other comments received). If an update is deemed appropriate then the text referred to here by Natural England will be amended, in an updated RIAA at Deadline 4. |
| R&I ref:<br>G23<br>RR ref:<br>G34                                 | 6.1 – Section 9.6.2.4 | <p>Calculation of adult baseline mortality of puffin at FFC SPA</p> <p>Natural England welcome that the Applicant has updated their calculation of adult baseline mortality for puffin at FFC SPA.</p> <p>We note that the Applicant has still not followed our advice to use the most recent count of 3080 individuals, as per Clarkson et al (2022). However, we acknowledge the Applicant's reasoning on the</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Issue largely resolved. See G21 above with respect to Burnell et al 2023.                                                                                                                                                                                                                                                            |  | The Applicants do not consider these comments to merit a re-submission of the RIAA and ES chapter on their own, however the Applicants will be reviewing the assessment to determine if updates are required more generally for Deadline 4 (i.e. for other comments received). If an update is deemed appropriate then the text referred to here by Natural England will be amended, in an updated RIAA at Deadline 4. |

| I.D.                                                      | Ref                                | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Recommendation                                                                                                                                                                                                                              | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                  |
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|                                                           |                                    | <p>application of a correction factor and consider that the discrepancy is unlikely to lead to a material difference in the impact values.</p> <p>However, we note that the Applicant's statement that the "most recent SPA estimate, as reported in Burnell <i>et al</i> 2023 is 4279" is incorrect, as the Clarkson <i>et al</i> (2022) count is more recent than the estimate presented in Burnell <i>et al</i> (2023) (see previous comment).</p>                       |                                                                                                                                                                                                                                             |      |                                                                                                                                                                                                                                                                                                                                                                                                      |
| R&I ref:<br>G20<br>RR ref:<br>G31                         | 6.1 – Sections 9.6.2.3 and 9.6.2.5 | <p>Apportioning of guillemot and razorbill to FFC SPA</p> <p>Natural England acknowledge and welcome that the Applicant has updated their apportioning of guillemot and razorbill impacts to FFC SPA to reflect our advice.</p>                                                                                                                                                                                                                                             | Issue Resolved. No action needed.                                                                                                                                                                                                           |      | The Applicants acknowledge Natural England's acceptance of the revised information.                                                                                                                                                                                                                                                                                                                  |
| R&I ref:<br>G23<br>RR ref:<br>G34                         | 6.1 – section 9.6.2.4, Table 9-31  | <p>Impacts on puffin at FFC SPA</p> <p>Natural England note that there appears to be an error in the calculation of displacement impacts on puffin at FFC SPA. At the apportioning rates stated by the Applicant and at 70% displacement and 10% mortality, the impact on puffin at FFC SPA should be 1.7 birds per year, not 1.4 birds per year as stated by the Applicant (Table 9-31,).</p>                                                                              | Natural England advises that the Applicant check and correct the figures presented for impacts on puffin at FFC SPA, however we acknowledge this discrepancy is unlikely to lead to a material change in the impact assessment conclusions. |      | The discrepancy between the Applicants' estimated annual impact on puffins from FFC SPA (1.4) and Natural England's (1.7) is the basis for their position that this is not a material difference and therefore the Applicants do not propose to update this. If an update is deemed appropriate then the text referred to here by Natural England will be amended, in an updated RIAA at Deadline 4. |
| R&I ref:<br>G53                                           | 6.1;<br>7.12.12.12                 | <p>Presentation of displacement matrices including upper and lower confidence intervals</p> <p>Natural England note that, while the Applicant has updated their displacement assessment, the relevant tables in Appendix 7.12.12.12 have not been updated and do not contain the apportioned displacement matrices relevant to the RIAA. This means that the displacement matrices for SPA impacts that include upper and lower confidence intervals are not presented.</p> | Natural England advise that Appendix 7.12.12.12 be updated to reflect the updated displacement assessment figures and that all displacement matrices are presented, including for the upper and lower confidence intervals.                 |      | As noted in the response to R&I ref: G53, the confidence interval estimates have not been updated as it is not appropriate for these to be summed. Hence the original values, obtained as the confidence intervals of the summed bootstrap samples (i.e. rather than sum of the individual confidence estimates) remain appropriate for this purpose.                                                |
| R&I ref:<br>G31,<br>G32<br>RR ref:<br>G42,<br>G43,<br>G44 | 6.1                                | <p>PVAs for impacts of the projects alone on guillemot, kittiwake, and gannet at FFC SPA</p> <p>Natural England welcome that the Applicant has undertaken PVAs to assess the impacts of the projects alone on guillemot, kittiwake, and gannet at FFC SPA.</p>                                                                                                                                                                                                              | Issue resolved. No action needed.                                                                                                                                                                                                           |      | The Applicants acknowledge Natural England's acceptance of the revised information.                                                                                                                                                                                                                                                                                                                  |
| R&I ref:<br>G32                                           | 6.1 – section 9.6.2.5              | <p>PVA for impacts of the projects alone on razorbill at FFC SPA</p> <p>The Applicant has not carried out a PVA to assess the impacts of the projects alone on razorbill at FFC SPA, despite the predicted increase</p>                                                                                                                                                                                                                                                     | No change. Natural England maintain our previous advice that a PVA should be run to assess projected impacts of the projects wherever these result in an increase in                                                                        |      | The Applicants consider there is little insight gained from running PVA on what is clearly a highly precautionary and improbably high impact                                                                                                                                                                                                                                                         |

| I.D.                                              | Ref                                         | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Recommendation                                                                                                                                                                                                                                                                                 | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| RR ref:<br>G43                                    |                                             | <p>in background mortality being above 1%, at 2.18% (70% displacement, 2% mortality) and 10.9% (70% displacement, 10% mortality).</p> <p>Natural England note that the Applicant has stated (Chapter 6.1, para 311) that a PVA for the projects alone is not required because "the results of the PVA presented in the in-combination assessment (section 9.6.2.5.5) encompass the worst case prediction above (for 70% displaced and 10% mortality)".</p> <p>Natural England note that this is not the case, as the PVA presented for the in-combination assessment of impacts on razorbill at FFC SPA (presented in section 9.6.2.5.5) does not encompass the worst case scenario of 70% displacement and 10% mortality, with the highest combination of ratios shown as 70% displacement and 2% mortality (see Table 9-38).(see R&amp;I G43).</p> | background mortality greater than 1%, when calculated according to Natural England's advice. We therefore advise that a PVA is run to assess impacts of the project alone on razorbill at FFC SPA.                                                                                             |      | magnitude (70% / 10%). Nevertheless, these PVA will be provided at Deadline 4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| R&I ref:<br>G26,<br>G43<br>RR ref:<br>G37,<br>G56 | 6.1 – Sections 9.6.2.3, 9.6.2.5 and 9.8.2.2 | <p>Displacement and mortality rate range represented in PVAs for impacts on guillemot and razorbill</p> <p>Natural England note that the PVAs run for impacts on guillemot and razorbill do not include the full range of displacement and mortality rates, as advised by Natural England. We note that the highest combination of rates included is 70% displacement and 2% mortality. Though we recognise that consent decisions to date have been based on 70% displacement and 2% mortality values, and that 70% and 10% represent an extreme worse-case scenario, the exclusion of the upper end of Natural England's advised range of displacement and mortality rates (70% and 10%) means that the full range of possible impact levels has not been captured by the PVAs undertaken.</p>                                                     | Natural England advise that the PVAs run to assess the predicted impacts of the projects on guillemot and razorbill populations encompass the full range of Natural England's advised displacement and mortality rates, to ensure that the full range of possible impact levels is considered. |      | The Applicants consider there is little insight gained from running PVA on what are clearly highly precautionary and improbably high impact magnitudes (70% / 10%). Nevertheless, these PVA will be provided at Deadline 4.                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| R&I ref:<br>G36<br>RR ref:<br>G49                 | 6.1;<br>7.12.12.13 – Table 3                | <p>PVA starting population for kittiwake at FFC SPA</p> <p>Natural England note that the starting population used for PVAs to assess impacts on kittiwake at FFC SPA is 91,008. We note that the starting population should be the most recent population estimate of 89,148, as given in Clarkson et al (2022), which has been used to calculate baseline mortality rate. See G21, G22, G24 above for comments on timeline of counts.</p>                                                                                                                                                                                                                                                                                                                                                                                                           | No change – this has not been addressed in the revised assessment. We maintain our advice that the most recent population estimate for kittiwake at FFC SPA should be used as the starting population for PVAs run for this population.                                                        |      | <p>Natural England is referring to the original PVA submission (App-116). The PVA were updated to address Natural England's comments in their Relevant Representation (RR-039) and these were included as Annex A: SPA PVA Results to the updated <b>RIAA HRA Part 4 of 4– Marine Ornithological Features (Revision 3)</b> [AS-085].</p> <p>The revised PVA for kittiwake at FFC SPA did use 89,148 as the starting population size as Natural England has requested (AS-085: Table A-3 Inputs: KI FFC Annual) and the results from this revised PVA are considered in the updated <b>RIAA HRA Part 4 of 4– Marine Ornithological Features (Revision 3)</b> [AS-085].</p> |
| R&I ref:                                          | 6.1; 7.12.12.13                             | Presentation of PVA inputs and outputs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Natural England advise that the inputs and outputs for all PVA scenarios undertaken for                                                                                                                                                                                                        |      | The PVA were revised following Natural England's requests in their Relevant Representation (RR-039) and these were provided in Annex A: SPA PVA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| I.D.                                      | Ref               | Comment                                                                                                                                                                                                                                                                                                                                                                                                | Recommendation                                                                                                                                                                                                                                                                                                                                                              | Risk | Applicants' Comment                                                                                                                                                                     |
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| G57                                       |                   | Appendix 7.12.12.13, containing the inputs and outputs of PVAs run for the assessment, has not been updated to reflect the updated impact values in the assessment and the PVA scenarios and results presented in the RIAA.<br><br>Natural England further note that the PVA scenarios are also not clearly described in this Appendix.                                                                | the assessment are clearly presented so that we can fully understand and assess the specification and parametrisation of the models. We advise that this should include presenting the log files for all PVA scenarios undertaken.<br><br>Note that this comment applies to PVAs run to assess impacts of both the projects alone and in-combination with other projects.   |      | Results (RIAA HRA Part 4 of 4– Marine Ornithological Features (Revision 3) [AS-o85]). All of the information required to run the PVA has been provided in these tables.                 |
| R&I ref:<br>G37<br>RR ref:<br>G50         | N/A               | In-combination assessments undertaken<br><br>Natural England welcomes that the Applicant has provided in-combination assessments for guillemot and puffin at the Farne Islands SPA. However, we have outstanding concerns with some aspects of the assessment methodology.                                                                                                                             | Issue progressed. See comments below relating to in-combination assessments for auks, e.g. G42.                                                                                                                                                                                                                                                                             |      | See responses to specific comments below.                                                                                                                                               |
| R&I ref:<br>G37<br>RR ref:<br>G50         | 6.1 – paras 84-86 | In-combination assessment for red-throated diver at Greater Wash SPA<br><br>We acknowledge that the Applicant has included an in-combination assessment for red-throated diver in the Greater Wash SPA, however it does not include impacts on this population from other projects.                                                                                                                    | Natural England consider that it would be best practice for a more thorough in-combination assessment for impacts on red-throated diver at the Greater Wash SPA to be undertaken. However, due to the low predicted impact values, we do not consider that this would have a material impact on assessment conclusions.                                                     |      | The Applicants acknowledge Natural England's position on these matters but note that any remaining disagreements have no material bearing on the assessment.                            |
| R&I ref:<br>G38<br>RR ref:<br>G51         | 6.1               | Projects included in the in-combination assessment<br><br>Natural England acknowledge and welcome the inclusion of all relevant Tier 4 projects in the in-combination assessments.<br><br>We note and agree with the Applicant that the totals from Outer Dowsing, Five Estuaries and North Falls are preliminary until final agreements have been reached between these projects and Natural England. | Issue around inclusion of the relevant Tier 4 projects is now resolved. However, we advise the Applicant collaborates with other Round 4 developers to agree on how updated impact values (based on SNCB advice) can be efficiently incorporated as the Examinations of these projects progress, and that the Applicant updates the Examination at an appropriate juncture. |      | The Applicants will continue to track the impacts for other projects currently in examination and consider the need to revise cumulative and in-combination assessments as appropriate. |
| R&I ref:<br>G39<br>RR ref:<br>G52,<br>G53 | 6.1               | Presentation of 'compensated-for' impacts within in-combination assessment<br><br>Natural England welcomes the Applicant has presented in-combination totals both including and excluding compensated-for projects.                                                                                                                                                                                    | Issue Resolved. No action needed.                                                                                                                                                                                                                                                                                                                                           |      | The Applicants acknowledge Natural England's acceptance of the revised information.                                                                                                     |

| I.D.                              | Ref                        | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Recommendation                                                                                                                                                                                                                                                                                                                                                                                                             | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| R&I ref:<br>G58                   | 6.1 – section<br>9.6.2.2.5 | In-combination totals for kittiwake at FFC SPA<br><br>Natural England note that the in-combination totals for impacts on kittiwake at FFC SPA appear to be lower than we would expect, given the totals presented during the SEP&DEP Examination [REP8-102]4. We note that the totals presented in Chapter 6.1, Table 9-23 lead to total impacts at SEP&DEP of 373 birds, whilst the in-combination total presented at SEP&DEP was 394.                                                                                                                                                                                                                                         | Natural England advise that the Applicant check the in-combination figures for kittiwake at FFC SPA and correct these if necessary. We also advise that the Applicant explains any remaining discrepancies in their assessment totals.                                                                                                                                                                                     |      | The Applicants will review the kittiwake in-combination table and update this if necessary at Deadline 4.<br><br>However, in advance of this review the Applicants note that in-combination tables often vary between applications due to differences in presentation of factors such as avoidance rates, and these are often explained in the accompanying text. Furthermore, the Applicants are of the opinion that revising these tables will have no material effects on the assessment conclusions and note Natural England has made no suggestion to the contrary. Furthermore, the Applicants note that as AEol has been conceded on this feature, any increase the in-combination total would not change the assessment conclusions. |
| R&I ref:<br>G42<br>RR ref:<br>G55 | 6.1                        | Presentation of in-combination totals for displacement-affected species<br><br>The Applicant has presented in-combination totals for displacement-affected species as total and apportioned abundance estimates, which they have then applied displacement and mortality rates to. Natural England note that this approach makes is more difficult to check the appropriate impact figures against those presented by other projects, and that it prevents the Applicant from considering the advice Natural England has given to previous projects on how these impacts should be calculated (e.g. appropriate displacement and mortality rates at Hornsea 4, see comment G59. | Natural England advise the Applicant presents in-combination totals for displacement-affected species according to the agreed impact values for each project (as for in-combination collision assessment), rather than abundance estimates. We refer the Applicant to the most recently agreed in-combination totals provided at SEP&DEP [REP8-102].                                                                       |      | The Applicants will review the in-combination displacement tables and update as necessary at Deadline 4. However, in advance of this review the Applicants note that in-combination tables often vary between applications due to presentational differences, and these are typically explained in the accompanying text. Furthermore, the Applicants are of the opinion that revising these tables will have no material effects on the assessment conclusions and note Natural England has made no suggestion to the contrary. So these aspects should not be the cause of any delay in Natural England finalising their position on the applications' impacts on ornithological interests.                                                |
| N/A                               | 6.1                        | Guillemot abundance at the projects as presented within in-combination assessments<br><br>The annual abundance total for the projects presented in Table 9-28 is 42,864. This appears to be incorrect, and should be 60,438 (see Chapter 7.12, para 618). However, we acknowledge that the abundance apportioned to FFC SPA in Table 9-28 and used in the assessment for impacts of the project alone and in-combination at FFC SPA appears to be correct.                                                                                                                                                                                                                      | Natural England advise that the Applicant correct the total annual abundance figure for guillemot in Table 9-28 and check all other guillemot abundance figures within the assessment for accuracy.                                                                                                                                                                                                                        |      | The Applicants agree that the nonbreeding and annual totals (pre-apportioning to FFC SPA) in Table 9-28 of <b>RIAA HRA Part 4 of 4– Marine Ornithological Features (Revision 3)</b> [AS-085] were not correctly updated for the revised assessment. However, as Natural England also notes, the apportioned values are correct (and correspond to those in Table 9-25, <b>RIAA HRA Part 4 of 4– Marine Ornithological Features (Revision 3)</b> [AS-085]. Therefore the assessment is unaffected by this error.<br><br>This error will be rectified at Deadline 4.                                                                                                                                                                           |
| R&I ref:<br>G59                   | 6.1                        | In-combination totals for guillemot and razorbill at FFC SPA<br><br>The in-combination assessments for guillemot and razorbill at FFC SPA do not take into account the advice provided at SEP&DEP [REP8-102]4, that, while we consider it is reasonable to consider displacement rates of 70% and mortality rates of 2% for in-combination assessments of impacts on auks, we advise that the impacts of Hornsea 4 on FFC SPA populations should be considered at a displacement rate of 70% and a mortality rate of 5%. We note that this would increase the in-combination impacts on FFC SPA                                                                                 | Natural England advise the Applicant to refer to the advice provided to SEP&DEP on the appropriate displacement and mortality rates to be used for the impacts of Hornsea 4 on guillemot and razorbill at FFC SPA and update their in-combination totals accordingly. We refer the Applicant to the agreed in-combination totals at SEP&DEP [REP8-102]4. We also refer the Applicant to our comment on presentation of in- |      | The Applicants will review the previous assessments as advised by Natural England and provide updated in-combination tables and PVA at Deadline 4 as appropriate.<br><br>However, in advance of this review the Applicants note that in-combination tables often vary between applications due to presentational differences, and these are typically explained in the accompanying text. Furthermore, the Applicants are of the opinion that revising these tables will have no material effects on the assessment conclusions and note Natural England has made no suggestion to the contrary. So these aspects should not be the                                                                                                          |

| I.D.                              | Ref                      | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Recommendation                                                                                                                                                                                               | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|                                   |                          | guillemot from 1,541 (Chapter 6.1, para 239) to 2,220, and on FFC SPA razorbill from 343 (Chapter 6.1, para 317) to 412.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | combination totals for displacement-affected species (G42).<br><br>Natural England recommend that the impacts of these updated figures are then assessed by PVA.                                             |      | cause of any delay in Natural England finalising their position on the applications' impacts on ornithological interests.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| R&I ref:<br>G60                   | 6.1                      | <p>PVA results</p> <p>Natural England note that the results of several of the PVAs undertaken by the Applicant are not as we would expect. For example, the PVA results for an impact of 1,541 guillemots at FFC SPA (Table 9-30) result in a mean Counterfactual of Growth Rate (CGR) of 0.9931, which corresponds to a reduction in population growth rate of 0.69%. We note that the SEP &amp; DEP PVA outputs for a similar impact of 1,539 achieved a median CGR of 0.986, which corresponds to a reduction in population growth rate of 1.4%.</p> <p>Similarly, the Applicant's stated PVA results for an impact of 343 razorbill at FFC SPA (Table 9-38) included a mean CGR of 0.9963, which corresponds to a reduction in population growth rate of 0.37%. Again, SEP &amp; DEP outcomes for a similar, and slightly higher, impact of 359, achieved a median CGR of 0.99, corresponding to a reduction in population growth rate of 1%.</p> <p>Natural England note that the differences in these results are considerable, and more than would be expected to result from relatively minor changes to starting population sizes or mean productivity rates. We further note that, as the details of the PVA scenarios run have not been updated in Appendix 7.12.12.13 to reflect the updated impact values or scenarios (see G57), we are unable to check that the models have been appropriately parametrised.</p> | Natural England advise that the Applicant check the results of all PVA scenarios run for the assessment and ensure that the inputs and outputs of all scenarios are clearly presented, along with log files. |      | <p>The Applicants have reviewed the DEP and SEP guillemot FFC PVA and consider that there are several probable reasons that different results were obtained. The starting population size used by DEP and SEP was 121,754 adults, while for DBS a value of 149,978 was used, more than 20% higher. The DEP and SEP figure was from the previous count in 2016 (which was the latest count at that time), while the one used for DBS was from 2022 (Clarkson <i>et al.</i> 2022<sup>39</sup>). The Applicants consider that, contrary to Natural England's statement that this is a 'relatively minor' difference, this is in fact a substantial difference between the two models one more than enough to account for the difference in the two PVA. However, in addition the results reported by DEP and SEP were for a period of 40 years while those for DBS are for a period of 35 years.</p> <p>It is a very similar situation for razorbill, but in fact the difference in population size between that used by DEP and SEP (40,506 adults) and DBS (61,345) is even greater in relative terms (50% higher). Again, these counts represent those from 2016 and 2022 (Clarkson <i>et al.</i> 2022). The same duration of PVA also applies to razorbill (40 years for DEP and SEP and 35 years for DBS).</p> <p>Unfortunately, unlike DBS, the DEP and SEP submission does not provide the full tables of input parameters so it is not possible for the Applicants to investigate if there are any other sources of difference between the two PVA reports, such as the productivity rates noted by Natural England.</p> <p>Natural England is also incorrect to state that the PVA have not been updated. These were provided in Annex A: SPA PVA Results of <b>RIAA HRA Part 4 of 4– Marine Ornithological Features (Revision 3)</b> [AS-085].</p> |
| R&I ref:<br>G49<br>RR ref:<br>G62 | 6.1; 10.18 – Table 2.1.1 | <p>Interpretation of PVA results: impacts of HPAI</p> <p>Natural England note that in their response to our Relevant Representations (10.18, Table 2.1.1), the Applicant has stated that the impacts of HPAI on seabird populations 'have been much less significant than feared'.</p> <p>Natural England strongly disagree that the impacts of HPAI on seabird populations have not been significant. We note, for example, that Tremlett <i>et al</i> (2024) estimated that there had been a 25%</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Natural England advise that the Examining Authority consider the uncertainties about the long-term population impacts of HPAI on seabirds when assessing the significance of the results of PVAs.            |      | <p>The Applicants acknowledge Natural England's position on this matter, and agree that for some species and some colonies declines have been significant, however for those of primary interest here such as gannet at FFC SPA the consequences have been much less concerning than feared. Butcher <i>et al.</i> (2024) report on the gannet counts at FFC SPA in 2022, 2023 and 2024 and note that 'Despite the influence of avian influenza, the colony has grown by 21.6% since 2022.' Thus, while the Applicants do not seek to dismiss the ongoing risk of HPAI to seabird colonies, this should be</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

<sup>39</sup> Clarkson, K., Aitken, D., Cope, R., & O'Hara, D. (2022) Flamborough and Filey Coast SPA seabird colony count 2022. RSPB, The Lodge, Sandy, Bedfordshire SG19 2DL

| I.D.                                       | Ref                                                  | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Recommendation                                                                                                                                                                                                                                | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|                                            |                                                      | <p>decline in UK gannet populations between the last seabird census (Burnell et al 2023) and the summer of 2023. Furthermore, Tremlett et al (2024) estimated that there had been a 20% decline in the English population of guillemots and an 18% decline in the English population of kittiwakes during the same time period. We acknowledge that in our Relevant Representations (G62), we erroneously referred to the latter two declines as being related to UK populations – we further note that the fact that these declines refer to the English populations makes them even more relevant to the projects. Natural England does not consider the scale of these declines to be insignificant.</p> <p>Furthermore, we note that several seabirds could not be assessed as part of the study reported in Tremlett et al (2024), so the impacts of HPAI on these species, which include razorbill and puffin, is unknown.</p> <p>Natural England note that the Applicant has also stated (10.18, Table 2.1.1), that the impacts of HPAI on seabird populations have 'resulted in temporary impacts on population growth rather than any long-lasting effects'. Natural England note that the most severe outbreak of HPAI in wild birds ever recorded began in 2021, with severe impacts on seabird populations in 2021, 2022 and 2023. There has therefore not been time to fully assess the long-term impacts of this outbreak on seabird populations, as has been made clear in assessments such as that by Tremlett et al (2024). We note that, at the time of writing, this outbreak continues globally and, in the UK, and future impacts on UK seabird populations cannot be ruled out.</p> <p>Natural England note that the Applicant has stated (10.18, Table 2.1.1) that population-level impacts of HPAI do not need to be considered at FFC SPA. We note that, except for gannet, there have been no colony counts of any seabird species at FFC SPA since 2022. It is therefore impossible to state that there have been no population-level impacts of the disease at the SPA. Furthermore, we note that the resilience of even apparently unaffected colonies is likely to be affected by large scale mortality in the wider metapopulations.</p> |                                                                                                                                                                                                                                               |      | <p>countered by consideration of the status of focal populations, rather than being treated as an over-arching risk to all species.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p>R&amp;I ref: G49</p> <p>RR ref: G62</p> | <p>6.1; 10.18-Table 2.1.1; 7.12 – section 12.5.4</p> | <p>Interpretation of PVA results: consideration of realistic assessments of current and future population trends</p> <p>Natural England consider that the Applicant may have misunderstood our Relevant Representations comment (G62) on the incorporation of realistic assessments of current and future seabird population trends, as they state (10.18, Table 2.1.1) that it is 'contradictory for Natural England to advise the Applicants to</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>Natural England advise that the Applicant consider realistic assessments of current and future seabird population trends, considering all relevant evidence, when assessing the significance of the predicted impacts of the projects.</p> |      | <p>The Applicants do not consider that they misunderstood Natural England's comment on this matter. Natural England's standard advice on conducting PVA is to omit density dependent regulation: '<i>where there is limited information on population regulation for the focal population, it is recommended that a density independent model is used instead.</i>' (Parker <i>et al.</i> 2022). Yet, in their comments Natural England is asking the Applicants to consider how density dependent effects may affect the results from their density independent models. Thus the two pieces of advice are</p> |

| I.D.                                       | Ref  | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Recommendation                                                                                                                                                                                                                                                    | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|                                            |      | <p>consider density-dependent effects while also being advised to undertake density-independent PVA'.</p> <p>Natural England note that we were not advising that density-dependence should be incorporated into PVAs, and that our comment referred to the need to consider realistic future seabird population trends in the interpretation of the significance of the results of PVAs. Natural England note, for example, that recent reductions in productivity rates in guillemot breeding at FFC SPA indicate effects of density dependence, and that there are not an infinite number of suitable breeding ledges for guillemot at FFC SPA. It is therefore inappropriate to assume that past population growth rates will continue over the next 30 years.</p> <p>Natural England note that, in section 12.5.4 of Chapter 7.12, the Applicant addresses the issues of long-term population declines in UK-breeding seabirds, and the likely future effects of climate change on these populations. However, these assessments of likely future trends in seabird populations are not factored into the assessment of the significance of the results of the PVAs.</p> | <p>We refer the Applicant to the approach taken by SEP&amp;DEP in considering a range of potential future growth rates, and suggest they take a similar approach.</p>                                                                                             |      | <p>contradictory. It would be very straightforward and robust to quantify the effects of density dependence on the populations being modelled by simply including this in the PVA. This approach would permit both the Applicants and Natural England to '<i>consider realistic assessments of current and future seabird population trends, considering all relevant evidence, when assessing the significance of the predicted impacts of the projects</i>' without recourse to doing this in a purely qualitative manner. PVA was developed precisely as a tool for understanding population dynamics and future trends in order that different scenarios could be explored, and that includes the natural regulatory mechanisms which affect all wild populations and prevent the sort of unconstrained growth which Natural England's comments appear to be directed at.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p>R&amp;I ref: G18</p> <p>RR ref: G63</p> | 7.12 | <p>Consideration of additional mitigation</p> <p>Natural England note that we advised in our Relevant Representations that further consideration should be given to potential measures to reduce impacts, given the scale of the predicted impacts of the projects on seabird features.</p> <p>Hotspot modelling of seabird densities and distributions in the study area may help to identify areas where impacts are particularly high, and that might be suitable for changes to array size or layout to mitigate impacts.</p> <p>Given the large numbers of seabirds recorded in the baseline surveys and the potential levels of connectivity with FFC SPA in particular, we consider this is to be a critical step for Habitats Regulations purposes.</p>                                                                                                                                                                                                                                                                                                                                                                                                              | <p>Natural England continue to advise that further consideration is given to potential mitigation measures to reduce impacts on seabird features, such as array reductions, changes to design and layout of arrays, or increasing the hub height of turbines.</p> |      | <p>Mitigation relating to air gaps has been applied in accordance with the Round 4 plan level HRA (The Crown Estate 2022) whereby, to reduce potential collisions with birds in flight (particularly kittiwakes), the clearance of the blades above the water was set at a minimum 34m above MSL. This mitigation measure was committed to by the Applicants early in the strategic compensation process and has been adhered to within the design envelopes of the Projects.</p> <p>The Applicants continued and are continuing to review the consenting, technical and commercial feasibility of increasing the minimum air gap throughout the pre-application and examination phases. The Applicants note that whilst increasing the lower blade tip clearance to minimise ornithological impact naturally leads to an increase to the upper tip height, this also has a consequential increase in the risk of impact. The Applicants have submitted an <b>Ornithological Mitigation Option Report</b> [AS-118] which considered the feasibility of increasing the air gap/hub height. The conclusion of this work is that increasing the air gap beyond 34m is not currently feasible due to the increased consenting, engineering, and financial risks to such an extent as to make the Projects commercially unviable. Further justification is presented in the <b>Ornithological Mitigation Option Report</b> [AS-118].</p> <p>As part of the progression of project design from the PEIR to the application stage the Array Area boundaries were reduced and refined. A number of factors, including bird distribution data, were considered as part of the boundary refinement exercise. Density mapping data based on the site-</p> |

| I.D.                              | Ref                                              | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Recommendation                                                                                                                                                                                                                                                         | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|                                   |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                        |      | <p>specific aerial survey data was collated and examined to indicate areas within The Crown Estate lease options that showed higher and lower densities of birds, and this was used alongside other environmental and technical information to enact the boundary change. An outline of the factors considered in the boundary refinement exercise was presented as part of the minutes from the ornithology ETG meeting on the 6<sup>th</sup> February 2024 (available in <b>Appendix F1 - Minutes of meetings – ETG</b> [APP-043]). The refinements to the Array Area boundaries was, therefore, undertaken to help reduce impacts on important bird populations.</p> <p>Any reductions or changes to the array design or layout must be considered against other environmental, technical, and engineering constraints, as well as benefits to ornithology. For example, the layout and site design must include requirements by MCA and Trinity House for navigational safety, including the provision of Search and Rescue lanes. Furthermore, The Crown Estate Lease requirement to meet a minimum specific power density would make further amendments to site design challenging at this stage. The Applicants must seek to achieve as close to the minimum power density of 5MW/km<sup>2</sup> in order to be competitive in the highly competitive bidding process for a Contract For Difference, without which the Projects may be delayed or not be constructed at all.</p> <p>The Applicants consider that a robust assessment has been provided and, with the exception of those SPA features for which an in-combination adverse effect on integrity has been conceded, this has demonstrated that the Projects will not have any significant or AEoI of ornithological interests. On this basis the Applicants do not consider any additional mitigation is required.</p> |
| R&I ref:<br>G50<br>RR ref:<br>G64 | 7.12 – Table 12-4,<br>para 753; 6.1 –<br>para 82 | <p>Embedded mitigation for red-throated diver at the Greater Wash SPA</p> <p>Natural England acknowledge and welcome the additional commitments to the use of existing shipping lanes in order to mitigate impacts on red-throated diver in the Greater Wash SPA. However, we note that the avoidance of cable installation works during the over-wintering period (1st November to 31st March inclusive) has not been included, as previously requested by Natural England.</p> | <p>Natural England advise that the Applicant should commit to avoiding or restricting cable installation works within Greater Wash SPA plus a 2km buffer during the over-wintering period (1st November to 31st March inclusive) to avoid impacts to this species.</p> |      | <p>The total area of overlap of the Offshore Export Cable Corridor with the Greater Wash SPA is 12.1km<sup>2</sup>. This represents approximately 0.3% of the total area of the Greater Wash SPA, which measures 3,536km<sup>2</sup> in extent. As noted in section 9.5.2 of <b>RIAA HRA Part 4 of 4 – Marine Ornithological Features (Revision 3)</b> [AS-085], accounting for the use of two cable installation vessels and the 2km buffer around each vessel, the worst case area from which birds could be displaced during Offshore Export Cable installation activities is 25.2km<sup>2</sup>, approximately 0.7% of the total area of the Greater Wash SPA.</p> <p>The Offshore Export Cable Corridor intersects the Greater Wash SPA at the very northern extent of the SPA's boundary. The region of the SPA which the Offshore Export Cable Corridor crosses has low densities of red-throated diver recorded, and the nearshore sections were not identified as within the species' distribution within the documentation that detailed the scientific case for the classification of the Greater Wash as a potential Special</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| I.D. | Ref | Comment | Recommendation | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|      |     |         |                |      | <p>Protection Area (Natural England and JNCC 2016<sup>40</sup>). The peak density of red-throated diver within the overlap of the Offshore Export Cable Corridor and the SPA is between 0.68 and 0.87 birds/km<sup>2</sup>, indicating up to 17 to 22 divers could be displaced at any given time during installation of the Offshore Export Cable Corridor. Installation of the trenchless crossing (e.g. Horizontal Directional Drill) exit pits and Offshore Export Cables for the projects within the Greater Wash SPA would occur as single isolated events. As such, any disturbance of red-throated diver individuals would occur in discrete events, and would not represent a continuous and sustained period of disturbance.</p> <p>As noted in section 9.5.2 of <b>RIAA HRA Part 4 of 4 – Marine Ornithological Features (Revision 3)</b> [AS-085], the review of available evidence for red-throated diver displacement previously submitted for the Norfolk Vanguard assessment (MacArthur Green 2019a) concluded that there would be little or no effect of displacement on diver survival. In line with this conclusion, a maximum, and hence precautionary, displacement caused mortality rate of 1% was identified as appropriate for the assessment conducted for the Projects. At this level of additional mortality, only a maximum of 0.2 individuals would be expected to die across the entire winter period (September to April) as a result of any potential displacement effects from the offshore cable installation activities, which would be restricted to a maximum of one non-breeding season.</p> <p>The estimated non-breeding population of red-throated divers for the Greater Wash SPA, from the SPA citation at classification, was 1,407 individuals. This is a mean of peak counts from aerial surveys carried out between 2002/03 to 2005/06 (Lawson <i>et al.</i>, 2016; Natural England and JNCC, 2016).</p> <p>The Greater Wash SPA population estimate may be considered dated as it is more than 10 years old. For the Outer Thames Estuary SPA, immediately to the south of the Greater Wash, more recent surveys in 2018 and 2013 resulted in an 180% increase to the SPA population estimate, from 6,446 individuals at the time of designation in 2010, to 18,079 (Natural England, 2019). This increase is attributed to a more accurate census method, with earlier surveys based on observers recording from planes likely to be an underestimate compared with more recent surveys using digital aerial photography. Thus, the population estimate on the Greater Wash SPA citation may underestimate the numbers present within the SPA and the actual density of red-throated diver present within the overlap of the Offshore Export Cable Corridor and the SPA.</p> <p>Given the minimal overlap of the Offshore Export Cable Corridor in relation to the Greater Wash SPA as a whole, the low peak density of red-throated</p> |

<sup>40</sup> Vg FINAL Greater Wash Departmental Brief 17 October 2016 ready for consultation.pdf

| I.D.                              | Ref | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Recommendation                                                                                                                                                                                                                                                                                                    | Risk | Applicants' Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| R&I ref:<br>G51<br>RR ref:<br>G65 | N/A | <p>Natural England note that due to the issues outlined above, most notably with respect to in-combination assessments and PVAs, we <b>are unable to confirm agreement with the impact values or comment on the assessment conclusions at this time.</b></p> <p>However, we note that since Hornsea Project Three Natural England's position has been that the in-combination total of collision mortality across consented plans/projects has already exceeded levels which are considered to be of an AEol to Kittiwake at FFC SPA, and that any additional mortality arising from these proposals would only reinforce this conclusion. We now consider this to also be the case for in-combination impacts on guillemot at FFC SPA (Hornsea 4 onwards).</p> <p>Moreover, we have already advised regulators that we cannot rule out an in-combination AEol on razorbill from FFC SPA, due to the impacts of North Sea windfarms, and on guillemot and the kittiwake component of the seabird assemblage at the Farne Islands SPA due to the substantial impacts of the Berwick Bank OWF.</p> | <p>Resolving the issues identified above will allow Natural England to provide our integrity judgements for the proposals alone and in-combination with other plans and projects, noting that for a number of species, the in-combination levels are such that we will be unable to rule out adverse effects.</p> |      | <p>As noted above in response to individual comments, the Applicants will review the submissions and provide updates as appropriate at Deadline 4.</p> <p>However, in advance of providing any necessary updates to the in-combination tables and PVAs, the Applicants note that the provision of these will not make a material difference to the assessment, since the results will not materially affect Natural England's conclusions and that, as adverse effect on integrity has already been conceded on guillemot and kittiwake (so change to the in-combination total would not change the assessment conclusions). So these aspects should not be the cause of any delay in Natural England finalising their position on the applications' impacts on ornithological interests.</p> |

## 2.4.7 Offshore Ornithology Compensation

Table 2-14 The Applicants' Response to Natural England's Advice on Offshore Ornithology Compensation [AS-16o]

| I.D.                                     | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| H2 - 1                                   | Natural England provided initial advice on the documents listed above in our response [AS-008] to the Rule 17 letter dated 26th November 2024 [PD-008]. We advise that the advice provided here should be read alongside our previous response. Natural England's additional advice on these documents applicable to all compensatory measures, and kittiwake and auk specific advice is set out below in sections 2-4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | The Applicants acknowledge this response.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Advice Applicable to All Measures</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| H2 - 2.1                                 | <p>Compensation level</p> <p>Natural England's comments on the revised ornithology assessment are provided in Appendix G2 of our Deadline 2 submission. Considerable progress has been made across the ornithology assessment, however, some outstanding methodological issues remain which prevent Natural England providing advice on final HRA impact values, and therefore compensation levels, at this time. We consider these issues should be easily resolvable within Examination timeframes.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | The Applicants acknowledge this response.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| H2 – 2.2                                 | <p>Compensation Implementation and Monitoring Plans (CIMP)</p> <p>Following the publication of the interim guidance on the Marine Recovery Fund by DESNZ on 29th January 2024, which confirmed that offshore ANS and predator eradication should be progressed at a project level in the first instance, we advise that species-specific Implementation and Management Plans should be submitted into the Examination process in a fully populated state, rather than as skeleton documents. These documents are of key importance as the success of proposed compensation measures are intrinsically linked to these Plans. We note that for auks it is stated that a detailed CIMP will be developed following confirmation of the site(s) for predator eradication. We are concerned this may not leave sufficient time for a CIMP to be submitted within Examination timeframes. We acknowledge that it will not be possible to fully populate all aspects of the CIMP prior to a site being confirmed, but several sections (e.g. success criteria) will be site independent or could be varied to reflect the sites still within consideration.</p> | <p>Compensation Implementation and Monitoring Plans (CIMPs) are typically developed post-consent and in collaboration with Steering Groups to ensure that there is a suitable level of agreement on the details contained within the document prior to it being submitted to the Secretary of State. The Applicant agrees that CIMPs are key documents but generally disagrees that these should be developed during Examination and without consultation with the respective kittiwake and auk Steering Group members. Additionally, details contained within CIMPs are usually at a more advanced stage post-consent compared to those available during Examination. As such, any CIMP submitted at this stage is likely to be subject to numerous revisions as detailed design processes advance. Moreover, due to the Projects' approach of maintaining transparency through Examination by updating documents regularly, it is unlikely that CIMPs submitted at this point will contain details that are not available to Natural England within the respective project level compensation plans</p> <p>Nonetheless, the Applicant acknowledges that there may be value in presenting information per the outline CIMP structure, though anything submitted into Examination would, by necessity be relatively high level at this stage. The Applicants will provide a populated Kittiwake CIMP, and Guillemot [and Razorbill] CIMP at Deadline 4 with information, where available. Schedule 18 of the DCO will be updated to reflect the existence of the outline CIMPs at the next iteration.</p> |
| <b>Kittiwake Compensation</b>            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| H2 – 3.1                                 | <p>Mitigation</p> <p>Noting the above that impact levels remain unagreed, we consider it important to highlight that based on the current assessment values, whether using the Applicant's or Natural England's approach, Dogger Bank South is the highest impacting project in English waters on FFC SPA kittiwake to date. We therefore maintain that further consideration should be given to mitigation measures that could reduce the Project's impacts prior to the need for compensation, such as array reductions or changes to the design and layout of the arrays. We understand from the Applicant's Ornithological Mitigation Options Report [AS-118] that they do not intend to</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Please see response to R&I ref: G18RR ref: G63 above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| I.D.             | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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|                  | raise the hub height further on the basis of financial and engineering constraints, indicating that this may not be a viable route.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| H2 – 3.2         | <p>Scale and delivery of measure</p> <p>As noted in our Rule 17 response [AS-008] we welcome that the Applicant has updated the Kittiwake Compensation Plan (KCP) in line with the revised ornithology assessment and presented compensation quantum calculated according to both the Hornsea 3 part 2 and Hornsea 4 approaches. Natural England provided further guidance on the Hornsea 3 part 2 versus Hornsea 4 approach in Appendix H1 of our Deadline 1 submission [REP1-065] and maintain that compensation quantum should be calculated according to the Hornsea 3 part 2 method. However, we note the Applicant disagrees with the use of the Hornsea 3 part 2 approach, in part due to a lack of information in the public domain on the calculation methodology. We acknowledge that identifying a robust and proportionate approach to quantifying the compensation requirements for offshore windfarms impacting seabird SPAs has proved challenging. Multiple methods have been used but there is no clear consensus on the most appropriate method to use. On behalf of Collaboration on Offshore Wind Strategic Compensation (COWSC), Natural England has commissioned the British Trust for Ornithology (BTO) to carry out a review of existing approaches to compensation calculations, and if possible to make recommendations to COWSC regarding the most appropriate method to use for black-legged kittiwake. The BTO review will also consider whether the recommendations are relevant to other seabird species. A final report to COWSC is scheduled for March 2025. Natural England will endeavour to keep current Examinations and prospective applicants updated on timescales.</p> | <p>The Applicants welcome the acknowledgement of complexities surrounding compensation quantum calculation, and the proposed review to be undertaken by the BTO. Upon receipt of the final report, the Applicants will review the BTO conclusions, and the recommendations made by Natural England. The Applicants will provide details on its understanding of the BTO work package and any implications to the Projects compensation requirements at the appropriate point during examination.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| H2 – 3.2 (cont.) | <p>We welcome that the Applicant has updated the KCP to refine and clarify the delivery options. The Applicant has now committed to delivering a single project-led ANS, with a second ANS to be delivered by Outer Dowsing (ODOW) OWF. We understand that discussions are underway to secure a Memorandum of Understanding to allow resilience to be shared between DBS and the ANS delivered by ODOW. Whilst this would ensure the delivery of two offshore ANS (provided ODOW receives consent), and the Applicant states their single ANS will provide sufficient quantum of compensation for kittiwake, we remain concerned that based on the current predicted impacts (acknowledging that further revisions are necessary) the provision of a single ANS may not be sufficient to deliver the level of compensation required.</p> <p>We highlight that whilst the Applicant has presented the level of compensation required for DBS according to both the Hornsea 3 and 4 approaches, only the Hornsea 4 values have been carried through for consideration of the provision required at a ratio greater than 1:1, or in-combination with ODOW (Section 5.3 of KCP). We also note that ODOW's compensation requirements have been further revised since revision 3 of the KCP was submitted. We advise that the Applicant update these values at a suitable juncture in the Examination and provide compensation requirements at ratios greater than 1:1 according to both the Hornsea 3 part 2 and 4 approaches.</p>                                                                                                                                                                                   | <p>A Memorandum of Understanding (MoU) between the Applicants and ODOW is has been agreed and signed by both parties. The Project-Level Kittiwake Compensation Plan will be updated at Deadline 4 to reflect this. However, should the ODOW Artificial Nesting Structure (ANS) installation be delayed, or not proceed, the Applicants maintain that their project led structure will provide sufficient nesting spaces to accommodate the Projects compensation requirement. As set out in <b>Round 4 Kittiwake Strategic Compensation Plan</b> [APP-053], the delivery of a second ANS for the Round 4 projects provides additional security from the perspective of compensation provision on a strategic basis, though is not required for the delivery of sufficient nesting spaces. Should ODOW not proceed for any reason, the cumulative Round 4 compensation requirement for would be reduced by an equivalent amount such that a second ANS would not be necessary. The Applicant would also like to highlight the presence of the Projects onshore ANS at Gateshead which provides additional resilience through early compensation delivery.</p> <p>Under the 'worst case' impact scenario calculated by the Applicants (the Hornsea 3 calculation method, UCI 95% and 100% apportionment to adult population) the Projects compensation requirement is 2,085 birds, this is reduced to 1,007 when the Hornsea 4 calculation is applied. This figure is presented within the <b>Precaution in the Ornithology Assessment and Implications for Compensation Quantum</b> [document reference 13.6] report and accompanying spreadsheet (submitted at Deadline 3) and represents a ratio of 1:1. At a ratio of 2:1, the Projects alone requirement for compensation would increase to 4,170 (2,014 using Hornsea 4 calculation) which remains within the 'compensation envelope' outlined in <b>Round 4 Kittiwake Strategic Compensation Plan</b> [APP-053]. The Applicant would consider the Hornsea 3 is value to be excessively precautionary and does not regard the use of a ratio exceeding 1:1 when applied in combination with the Hornsea 3 calculation method alongside a 95% UCI, 100% adult apportionment to be appropriate. However, to provide further comfort, the ANS design being progressed by the Applicants by their appointed contractor is modular until the point of fabrication, which ensures flexibility for the structure</p> |

| I.D.                         | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| H2 – 3.3                     | <p>Site selection</p> <p>Natural England provided advice to the Applicant on the new Areas of Search (AoS) included in 10.19 Project Level Kittiwake Artificial Nesting Structure (ANS) Site Selection report [PDB-007] outside of the Examination on 9th December 2024. We have repeated this below for transparency.</p> <ul style="list-style-type: none"> <li>Site F - We welcome that the area that overlapped with the North Norfolk Sandbanks and Saturn Reef (NNSSR) SAC has been removed from the Area of Search.</li> <li>Sites 4 and 5 - As per our Relevant Representations advice, we highlight that these sites appear to be within the buffer zones for DBS and the Hornsea Zone offshore wind farms (OWF). Consideration should be given to a greater degree of collision risk for a colony established here.</li> <li>6, 7 &amp; North-West - These locations are not as far inshore as the original 'West' location, however consideration should still be given to the likelihood of competition with birds foraging from FFC SPA. We advise the Project to look into any overlap with these areas in available kittiwake utilisation distribution maps (e.g. Cleasby et al. 2020, Waggitt et al. 2020). For site 6 it would also be beneficial to present the minimum distance to Flamborough Head, for consideration of the Yorkshire Wolds AONB.</li> </ul> <p>We understand from the Applicant's Issue Specific Hearing summary [REP1-049] that the sites have been further refined to three locations with geophysical and geotechnical surveys planned in April and May 2025, and Marine License Applications to follow in Q2 2025. We will provide further comment on the refined shortlisted sites following review of Revision 4 of the KCP, submitted by the Applicant at Deadline 2 [REP2-011].</p> | <p>The Applicants welcome feedback on the shortlisted ANS areas of search (AoS) outlined in <b>Project Level Kittiwake Artificial Nesting Structure (ANS) Site Selection Report</b> [PDB-007]. A buffer of 15km was applied around all offshore wind farms when identifying initial AoS, ensuring that all sites identified conformed with the guidance outlined in the <b>Round 4 Kittiwake Strategic Compensation Plan</b> [APP-053]. Furthermore, an update on ANS site selection was provided in <b>Appendix 1 - Project Level Kittiwake Compensation Plan (Revision 4)</b> [REP2-010] at Deadline 2 which outlined the refinement process and presented the final three candidate sites being progressed for site investigation works.</p> <p>No sites were progressed in Sites F, 5, 7 and North-West.</p> <p>Two sites were progressed in Site 4, these remained in excess of 15km from any OWF boundaries.</p> <p>A single candidate site was also progressed in Site 6. While the Applicants have had access to the RSPB Pilot Study report (2017) and Cleasby <i>et al.</i> (2020), they have not had access to the modelled data presented in these publications. In absence of this data, the Applicants have georeferenced the spatial data presented within these respective reports with the acknowledgement that accuracy cannot be guaranteed. A high-level appraisal suggests that all three candidate sites are located outside of the most utilised hotspots presented in Cleasby <i>et al.</i> (2020) and RSPB (2017) and that this is likely to reduce chances of resource competition with existing onshore colonies. While the appraisal of this data is valuable in understanding where FFC SPA birds forage, there are limitations to the including small sample sizes (13 birds in 2017), tracker bias due to battery capability, and limited snapshots of data that cannot be applied to UD patterns throughout the breeding season. The candidate site 6A is located approximately 62km from the proposed Yorkshire Wolds AONB (Flamborough Head) at the closest point.</p> |
| H2 – 3.4                     | <p>Delivery of measure: Timing</p> <p>Natural England currently maintain the advice provided in our Relevant Representation, that ANS should be installed four breeding seasons prior to operation. However, we note that the Applicant has reduced the proposed number of breeding seasons for an ANS to be installed prior to operation from three to two, and that a document in support of this has been submitted at Deadline 2 [REP2-011]. We will therefore review this and provide further comment at Deadline 3.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>The Applicants acknowledge this response.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Guillemot / Razorbill</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| H2 – 4.1                     | <p>Site selection</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>The Applicants have undertaken surveys at both Worms Head and Middle Mouse in January and February 2025 respectively. Surveys at Worms Head have enabled an estimation of the suitable available habitat,</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| I.D.     | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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|          | <p>Natural England consider that the advice provided in our Rule 17 response [AS-008] still stands with respect to the predator eradication measure. We understand from discussions with the Applicant that surveys to determine rat presence have now been undertaken at Worms Head, with results to be provided at Deadline 3, and that surveys to assess habitat suitability and rat presence on Middle Mouse were due to occur in February. We acknowledge and welcome this progress, as the results of these surveys will be an essential component in determining whether predator eradication is feasible at these locations. However, if rats are present, it will still need to be determined whether they are having, or are likely to be having, an impact on the abundance, productivity and/or distribution of guillemot and razorbill.</p> <p>We welcome that the Applicant has continued to engage with identifying opportunities to support and progress an eradication measure at the Isles of Scilly, acknowledging The Wildlife Trust's position that their preference is for the measure to be delivered strategically.</p>                                                                                                                                                                                                                                                                                                           | <p>which is presented in a redacted form the <b>Guillemot [and Razorbill] Compensation Site Shortlist Refinement Report (Revision 2)</b> [document reference: 10.20] to be submitted at Deadline 3, with a non-redacted version provided to Natural England. The surveys at Worms Head also confirmed the presence of rats at the site, which was corroborated by the National Trust during subsequent consultation on 21<sup>st</sup> February 2025. The surveys at Middle Mouse were inconclusive and further surveys will be required to confirm the presence of rats at this location. The availability of habitat at this site remains unchanged from that presented in the <b>Guillemot [and Razorbill] Compensation Site Shortlist Refinement Report [PDB-008]</b>. Further surveys are proposed to be undertaken during the auk breeding season May/June 2025, to gather additional evidence on the impacts that predators are having on guillemot and razorbill.</p> <p>The Applicants acknowledge Natural England's positive feedback regarding the Isles of Scilly and are continuing to work with Offshore Wind Industry Council (OWIC) to develop a strategic solution at this location as detailed in the Applicants' Responses to the ExQ1 [document reference: 13.2], OR.1.30. The Applicants note that, in a statement sent by Defra to the relevant developers on 13<sup>th</sup> March 2025, Natural England are included in the list of organisations involved in the Task and Finish Group to establish the mechanisms required to allow predator eradication to be delivered as a strategic compensation measure, noting the option for this to delivered by the MRF.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| H2 – 4.2 | <p>Scale of measure</p> <p>Notwithstanding the revisions needed on the impact assessment (see Section 2.1), the updated Guillemot and Razorbill Compensation Plan (GRCP) indicates that the sites identified by the Applicant for project-led compensation are only estimated to have capacity to compensate for the Project's impacts according to the Applicant's approach. We also highlight that in contrast to the KCP, predicted impacts and compensation quantum in the GRCP have only been provided for the central impact estimates. The upper Confidence Intervals have not been presented, and it is therefore unclear whether these sites would still have capacity were the upper Confidence Interval values to be considered.</p> <p>It is also unclear from the Site Refinement Report [PDB-008] if rat presence has been confirmed at the locations identified on the Isles of Scilly. Whilst 'Are invasive predators present?' is listed as one of the questions for the site shortlist refinement, determining rat presence is not included in the survey details. The surveys are described as being to confirm suitable, available/potential auk habitat, however it is then stated that the Scilly locations could provide an estimated X amount of rat-free nesting space. We highlight that if any of these locations are already rat-free, the available habitat cannot be assumed to contribute to the compensation measure.</p> | <p>As discussed elsewhere in the <b>Precaution in the Ornithology Assessment and Implications for Compensation Quantum</b> [document reference 13.6] (submitted at Deadline 3), the Applicants consider that the compensation quantum should be determined by use of the mean, not the upper confidence interval and should be based upon preferred displacement and mortality rates of 50% and 1% respectively.</p> <p>Based on the higher estimate of available habitat, using a density of 46 pairs/m<sup>2</sup> (Harris and Wanless, 1987<sup>41</sup>), Middle Mouse has sufficient compensation capacity to provide 100% of the project-level compensation requirement for the Applicants' preferred displacement and mortality rates (50% and 1%) and using the upper confidence interval as presented in the <b>Precaution in the Ornithology Assessment and Implications for Compensation Quantum</b> [document reference 13.6] (submitted at Deadline 3). Using the more conservative estimate of available habitat, based on a density of 20 pairs/m<sup>2</sup> (Harris and Birkhead, 1985<sup>42</sup>), Middle Mouse does not provide 100% of the project-level compensation requirement for the upper confidence interval at the Applicants' preferred displacement and mortality rates (50% and 1%).</p> <p>The Worms Head site would have sufficient compensation capacity, based on the more conservative estimate of available habitat (20 pairs/m<sup>2</sup>), for the upper confidence interval at the Applicants' preferred displacement and mortality rates of 50% and 1%. At the higher estimate of available habitat (46 pairs/m<sup>2</sup>), Worms Head has sufficient compensation capacity to provide 100% of the project-level compensation requirement for the upper confidence interval at displacement and mortality rates of 70% and 2%.</p> <p>All of the combinations of impact inputs and displacement and mortality rates are presented in the <b>Precaution in the Ornithology Assessment and Implications for Compensation Quantum</b> [document reference 13.6] (submitted at Deadline 3) and the habitat availability for each site is detailed in the non-redacted version of <b>Guillemot [and Razorbill] Compensation Site Shortlist Refinement Report (Revision 2)</b> [document reference 10.20] which will be provided to Natural England and the Examining Authority.</p> |

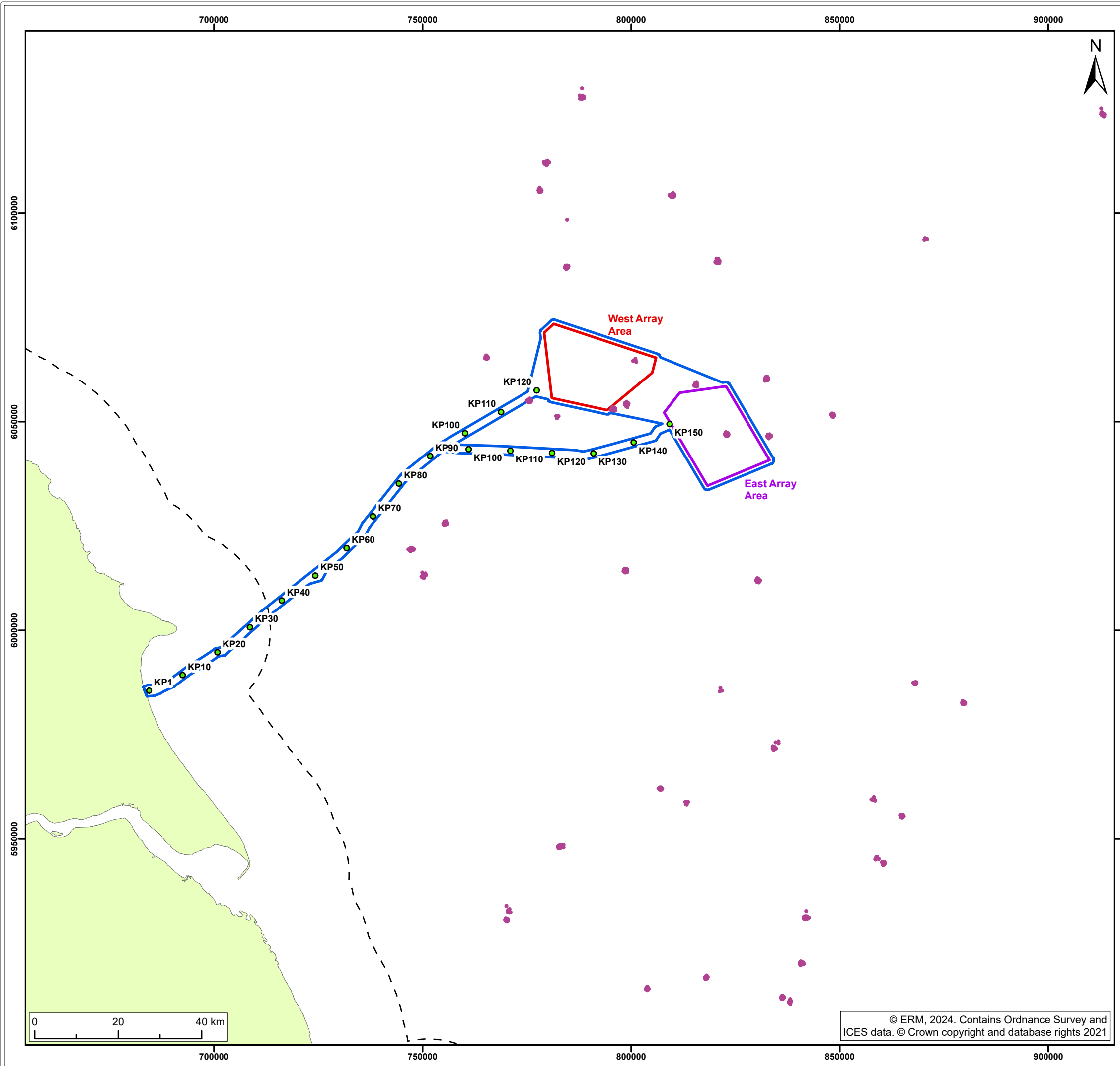
<sup>41</sup> Harris, M.P. and Wanless, S. 1987. The breeding biology of Guillemots *Uria aalge* on the Isle of May over a six year period. Ibis 130: 172-192.

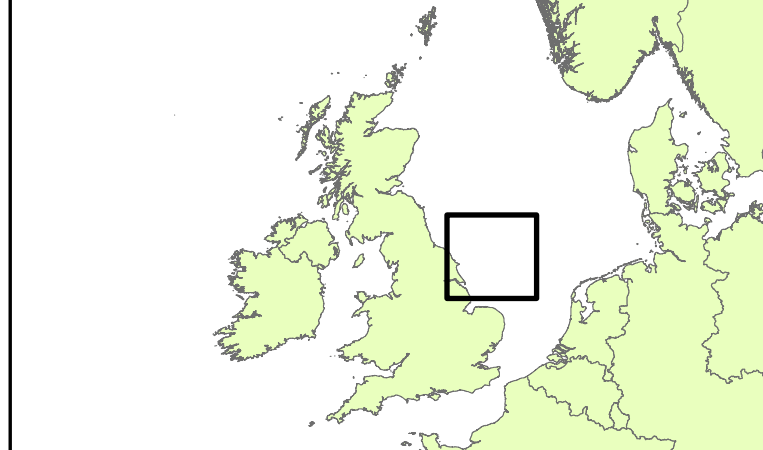
<sup>42</sup> Harris, M.P. and Birkhead, T.R. 1985. Breeding ecology of the Atlantic Alcidae. In D.N. Nettleship and T.R. Birkhead (eds.), The Atlantic Alcidae (London: Academic Press).

| I.D.     | Natural England's Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Applicants' Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| H2 – 4.3 | <p>Connectivity</p> <p>Natural England welcomes that an assessment of connectivity with the National Site Network has been included within the GRCP. The Applicant acknowledges connectivity with auks at Flamborough and Filey Coast Special Protection Area (FFC SPA) is unlikely given the distances from Middle Mouse, Worms Head and the Isles of Scilly. They also confirm that benefits would be delivered to auks within the UK Western Waters Biologically Defined Minimum Population Scale (BDMPS) population rather than the UK North Sea and Channel BDMPS, which the FFC SPA population sits within. However, the Worms Head and Middle Mouse locations are within 40-200km of the Skomer, Skokholm and the Seas of Pembrokeshire SPA respectively, where guillemot and razorbill are components of the breeding bird seabird assemblage, which we agree is within the natal dispersal range of guillemot and razorbill. However, this is a data poor area and what is available suggests low natal dispersal rates for these species. We therefore agree that there is a pathway for birds from these locations to recruit and contribute to the National Site Network, however it is likely to be limited, and this uncertainty should be reflected in the level of compensation provision.</p> <p>With respect to the Isles of Scilly, the situation is slightly different. Guillemot and razorbill do not currently occur in numbers to meet either of the criteria to be included as named assemblage components in the Isles of Scilly SPA seabird assemblage (national importance and over 2,000 individuals), but they nevertheless form part of the SPA's seabird assemblage and contribute to its abundance and diversity. As such, any additional breeding guillemot and razorbill on Scilly that arise as part of the strategic approach will directly benefit the National Site Network and fall under the protective provisions of the Habitats Regulations. Furthermore, it is possible that a successful eradication campaign delivered at scale could boost numbers to the extent that they become named assemblage components in the future.</p> | <p>As acknowledged by Natural England, the case for connectivity was established in <b>HRA: Provision of Evidence Appendix 2 - Guillemot [and Razorbill] Compensation Plan (Revision 3)</b> [AS-089] for each of the colonies identified since they are all located within reported recruitment distances. While the probability of recruitment from a natal (hatched) colony to any particular breeding colony is likely to decline with increasing distance, any additional birds hatched within the regional population will ultimately be contributing to the overall coherence of the National Site Network, including individuals that recruit to non-SPA colonies. This is because growth at those colonies will also contribute to growth in the regional populations (i.e. the inter-connected nature of seabird breeding populations means that they are all linked to a greater or lesser extent, whether designated as SPAs or not). Thus the Applicants propose that compensation ratios should be applied to address uncertainty that the proposed measure (e.g. rat eradication) will deliver its projected outcomes (increased population and productivity) and not on the basis of where those additional hatched birds recruit as breeding adults. Since the auk displacement assessment already contains several independent, additive, sources of precaution (over-estimates of displacement rate (70%), mortality rate (&gt;=2%), assumption that all birds in breeding season are breeders at FFC SPA, assumption that 70% of post-breeding birds are from FFC SPA, density independent PVA projections), the Applicants consider that no further compensation ratio should be applied as the 1:1 estimate is already highly precautionary.</p> <p>The Applicants welcome Natural England's acknowledgement that compensation on the Isles of Scilly will contribute directly to the National Site Network.</p> |

# Appendix A – Fish and Shellfish Figures

Appendix for REP2-061:19 and REP2-061:24 in **Table 2-3**.



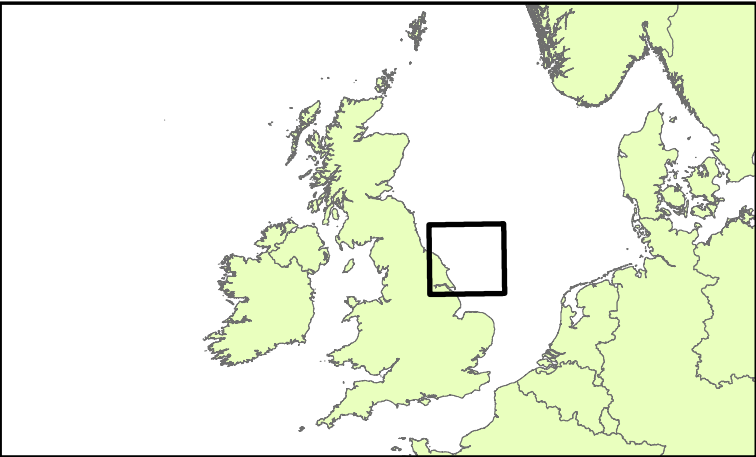
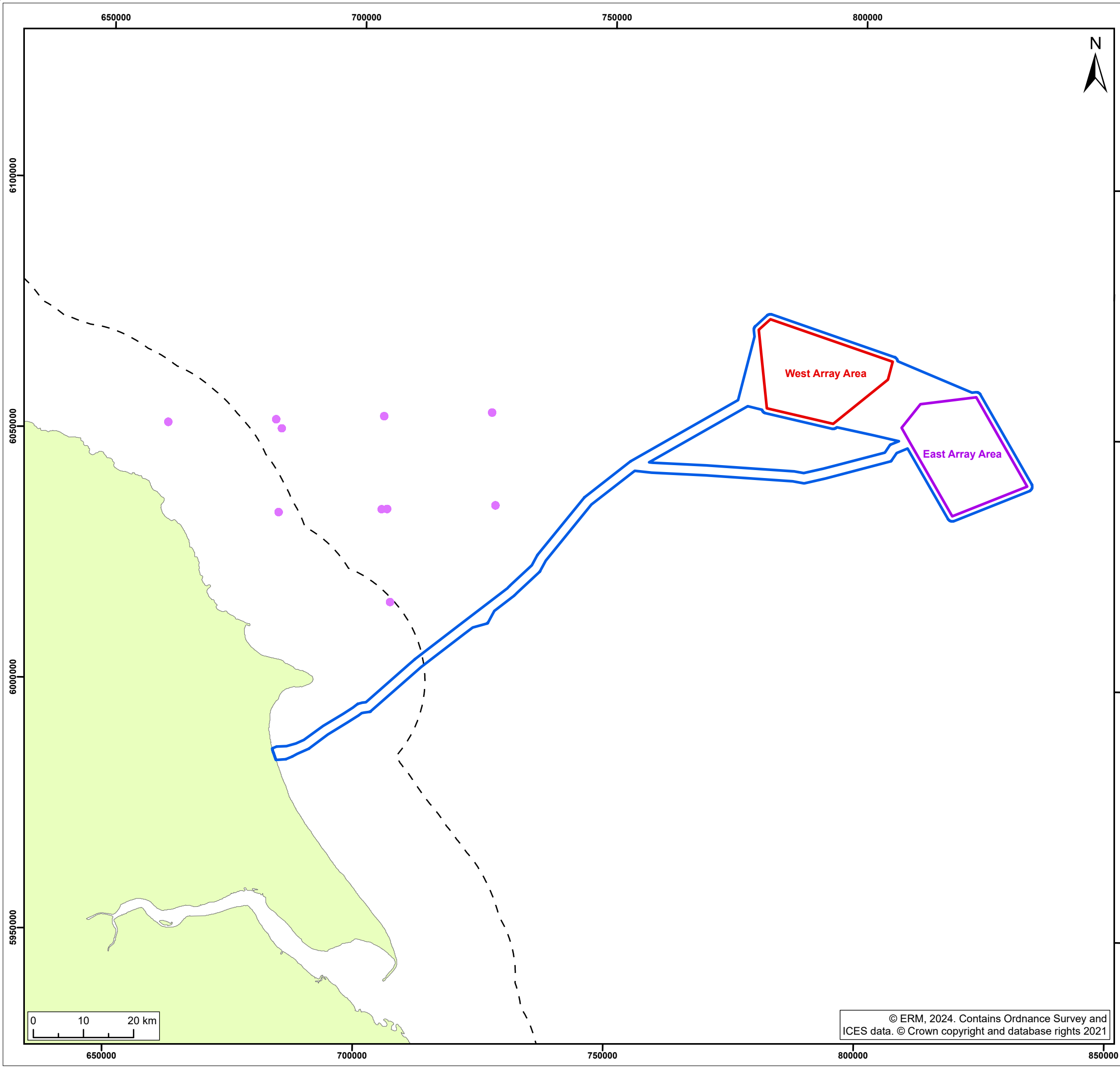


**Legend:**

- - UK 12 nm limit
- Array Area Boundary**
  - Offshore Development Area
  - DBS East Array Area
  - DBS West Array Area
- KP Points
- Survey Data**
  - North Sea Sandeel Survey (2014 - 2024)

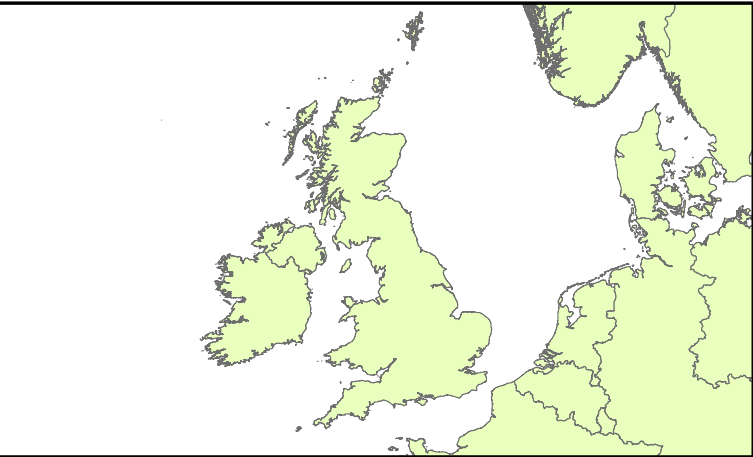
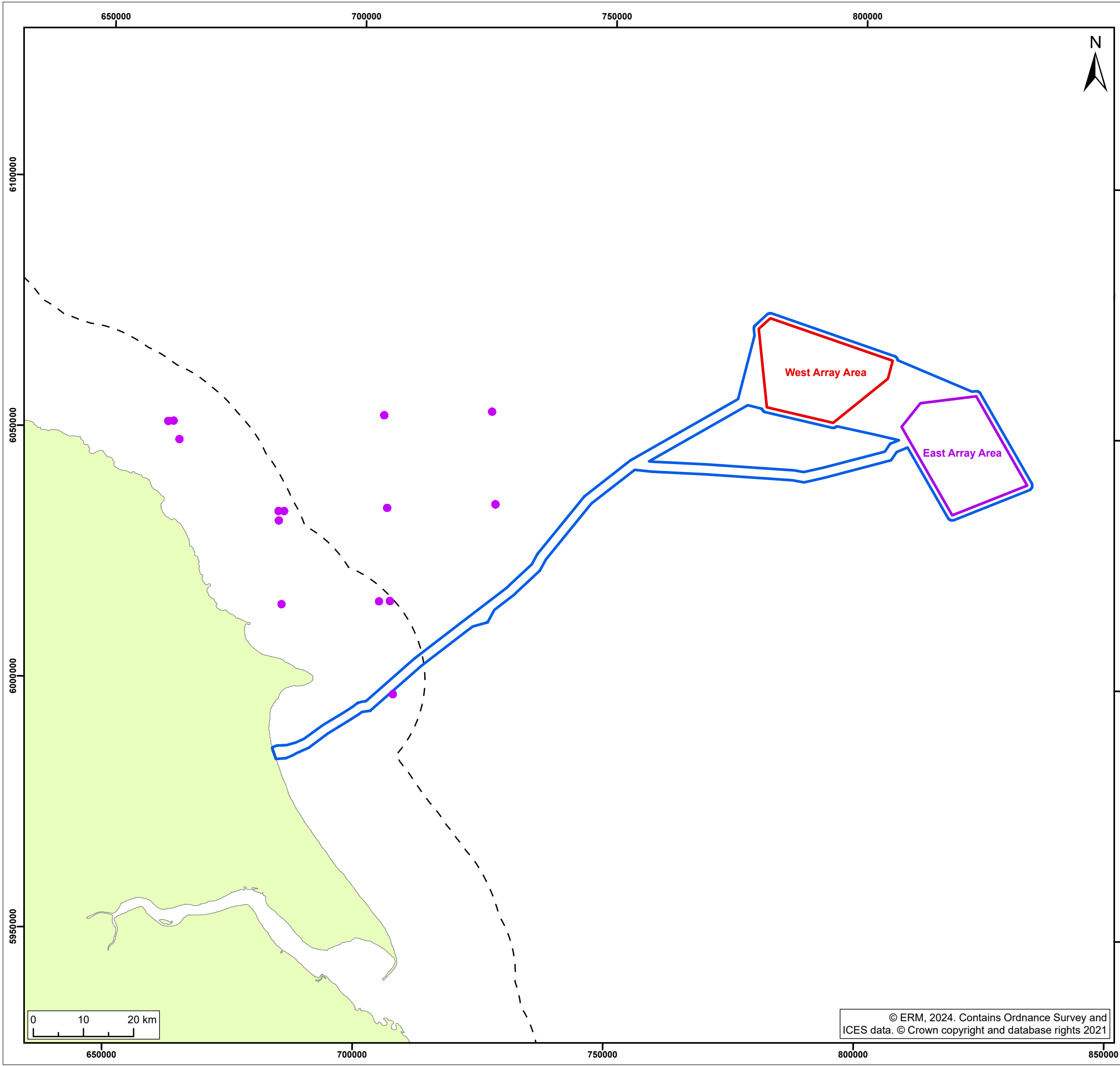
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| S1                                                                                                                        | P01 | 2/20/2025                                     | J0754512-MAP-101-SandeelSurvey-01                                            | MW  | MKH                 |     |
| SUI                                                                                                                       | REV | DATE                                          | DESCRIPTION                                                                  | DRW | CHK                 | APR |
| Title:                                                                                                                    |     |                                               |                                                                              |     |                     |     |
| The distribution of North Sea Sandeel Survey (NSSS) presence samples within the vicinity of the Offshore Development Area |     |                                               |                                                                              |     |                     |     |
| Figure: 1-1                                                                                                               |     | Drawing No: J0754512-MAP-101-SandeelSurvey-01 |                                                                              |     |                     |     |
| Co-ordinate system:<br>WGS 1984 UTM Zone 30N                                                                              |     |                                               | Page Size:<br>A3                                                             |     | Scale:<br>1:900,000 |     |
| Project:<br><br>Dogger Bank South<br>Offshore Wind Farms                                                                  |     |                                               | Report:<br><br>The Applicants' Responses<br>to Deadline 2<br>Documents - MMO |     |                     |     |





- Legend:**
- Array Area Boundary**
- DBS East Array Area
  - DBS West Array Area
  - Offshore Development Area
- IHLS Temperature**
- Less than 12°C

|                                                                                                                                 |     |                                                      |                                                                              |                     |     |     |
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| S1                                                                                                                              | P01 | 2/20/2025                                            | J0754512-MAP-102-IHLSPre17_LessThan12-01                                     | MW                  | MKH |     |
| SUI                                                                                                                             | REV | DATE                                                 | DESCRIPTION                                                                  | DRW                 | CHK | APR |
| Title:                                                                                                                          |     |                                                      |                                                                              |                     |     |     |
| The Distribution of IHLS TempMaxSam data collected between 2007 and 2017, recording temperatures at less than 12 <sup>o</sup> C |     |                                                      |                                                                              |                     |     |     |
| Figure: 2-1                                                                                                                     |     | Drawing No: J0754512-MAP-102-IHLSPre17_LessThan12-01 |                                                                              |                     |     |     |
| Co-ordinate system:<br>WGS 1984 UTM Zone 30N                                                                                    |     |                                                      | Page Size:<br>A3                                                             | Scale:<br>1:750,000 |     |     |
| Project:<br><br>Dogger Bank South<br>Offshore Wind Farms                                                                        |     |                                                      | Report:<br><br>The Applicants' Responses<br>to Deadline 2<br>Documents - MMO |                     |     |     |



**Legend:**

**Array Area Boundary**

- DBS East Array Area
- DBS West Array Area
- Offshore Development Area

— - UK 12 nm limit

**IHLS Temperature**

- 12°C to 12.8°C

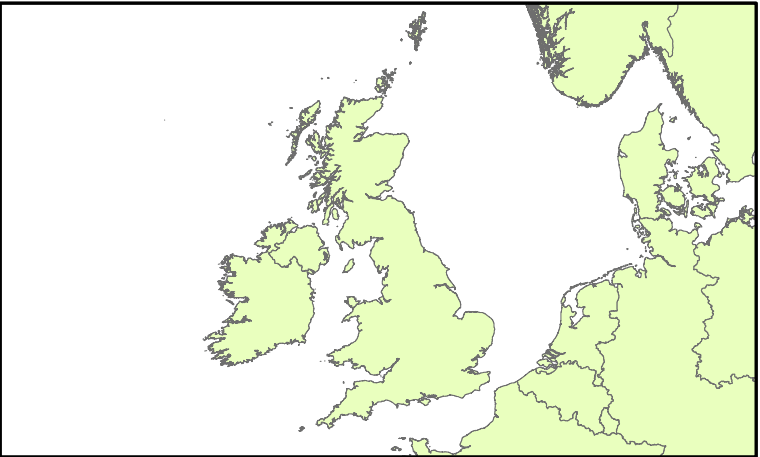
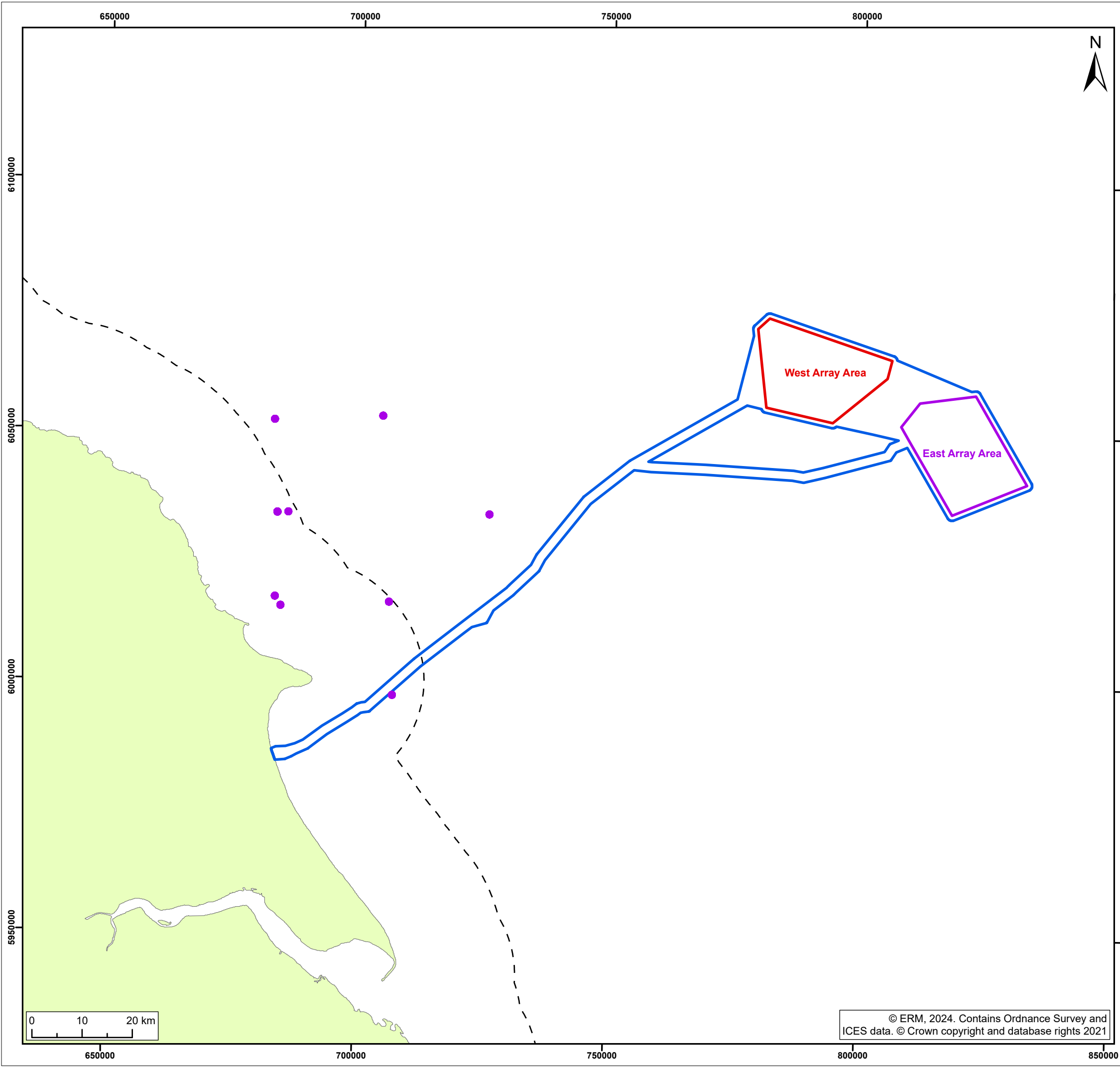
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|     |     |           |                                       |     |     |     |
| S1  | P01 | 2/20/2025 | J0754512-MAP-103-IHLSPre17_12to128-01 | MW  | MKH |     |
| SUI | REV | DATE      | DESCRIPTION                           | DRW | CHK | APR |

Title:  
The Distribution of IHLS TempMaxSam data collected between 2007 and 2017, recording temperatures between 12°C and 12.8°C

Figure: 2-2 Drawing No: J0754512-MAP-103-IHLSPre17\_12to128-01

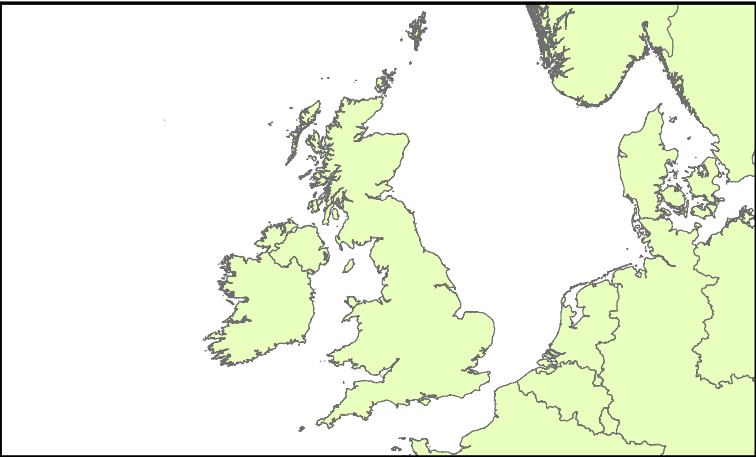
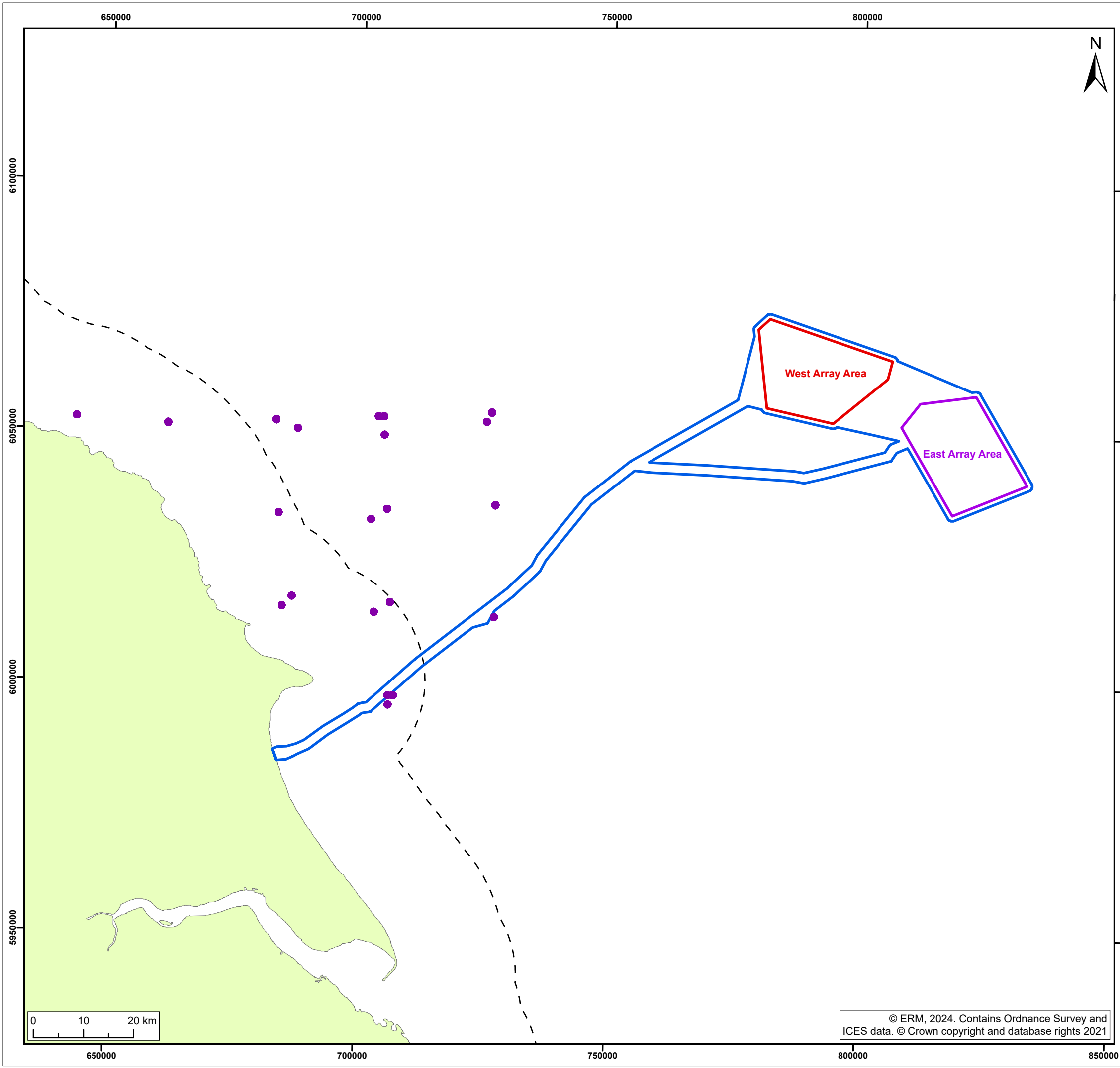
Co-ordinate system: WGS 1984 UTM Zone 30N Page Size: A3 Scale: 1:750,000

Project: Dogger Bank South Offshore Wind Farms Report: The Applicants' Responses to Deadline 2 Documents - MMO



- Legend:**
- Array Area Boundary**
- DBS East Array Area
  - DBS West Array Area
  - Offshore Development Area
- IHLS Temperature**
- 12.8°C to 13°C

|                                                                                                                          |     |                                                    |                                                                              |                     |     |     |
|--------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------|------------------------------------------------------------------------------|---------------------|-----|-----|
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| S1                                                                                                                       | P01 | 2/20/2025                                          | J0754512-MAP-104-IHLSPre17_12.8to13-01                                       | MW                  | MKH |     |
| SUI                                                                                                                      | REV | DATE                                               | DESCRIPTION                                                                  | DRW                 | CHK | APR |
| Title:                                                                                                                   |     |                                                    |                                                                              |                     |     |     |
| The Distribution of IHLS TempMaxSam data collected between 2007 and 2017, recording temperatures between 12.8°C and 13°C |     |                                                    |                                                                              |                     |     |     |
| Figure: 2-3                                                                                                              |     | Drawing No: J0754512-MAP-104-IHLSPre17_12.8to13-01 |                                                                              |                     |     |     |
| Co-ordinate system:<br>WGS 1984 UTM Zone 30N                                                                             |     |                                                    | Page Size:<br>A3                                                             | Scale:<br>1:750,000 |     |     |
| Project:<br><br>Dogger Bank South<br>Offshore Wind Farms                                                                 |     |                                                    | Report:<br><br>The Applicants' Responses<br>to Deadline 2<br>Documents - MMO |                     |     |     |



**Legend:**

**Array Area Boundary**

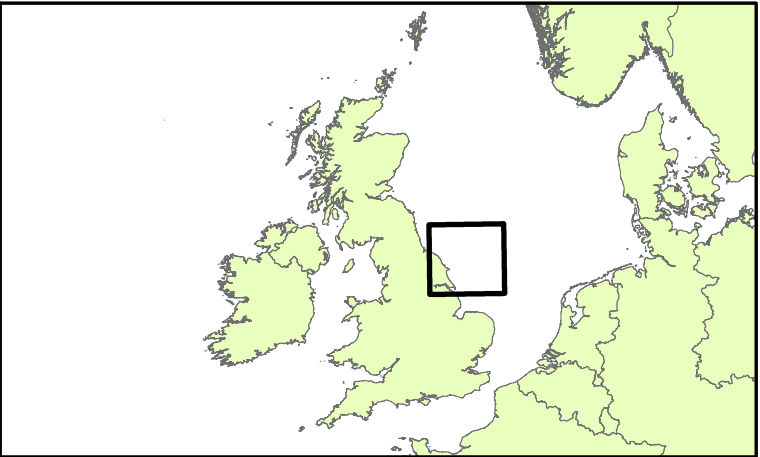
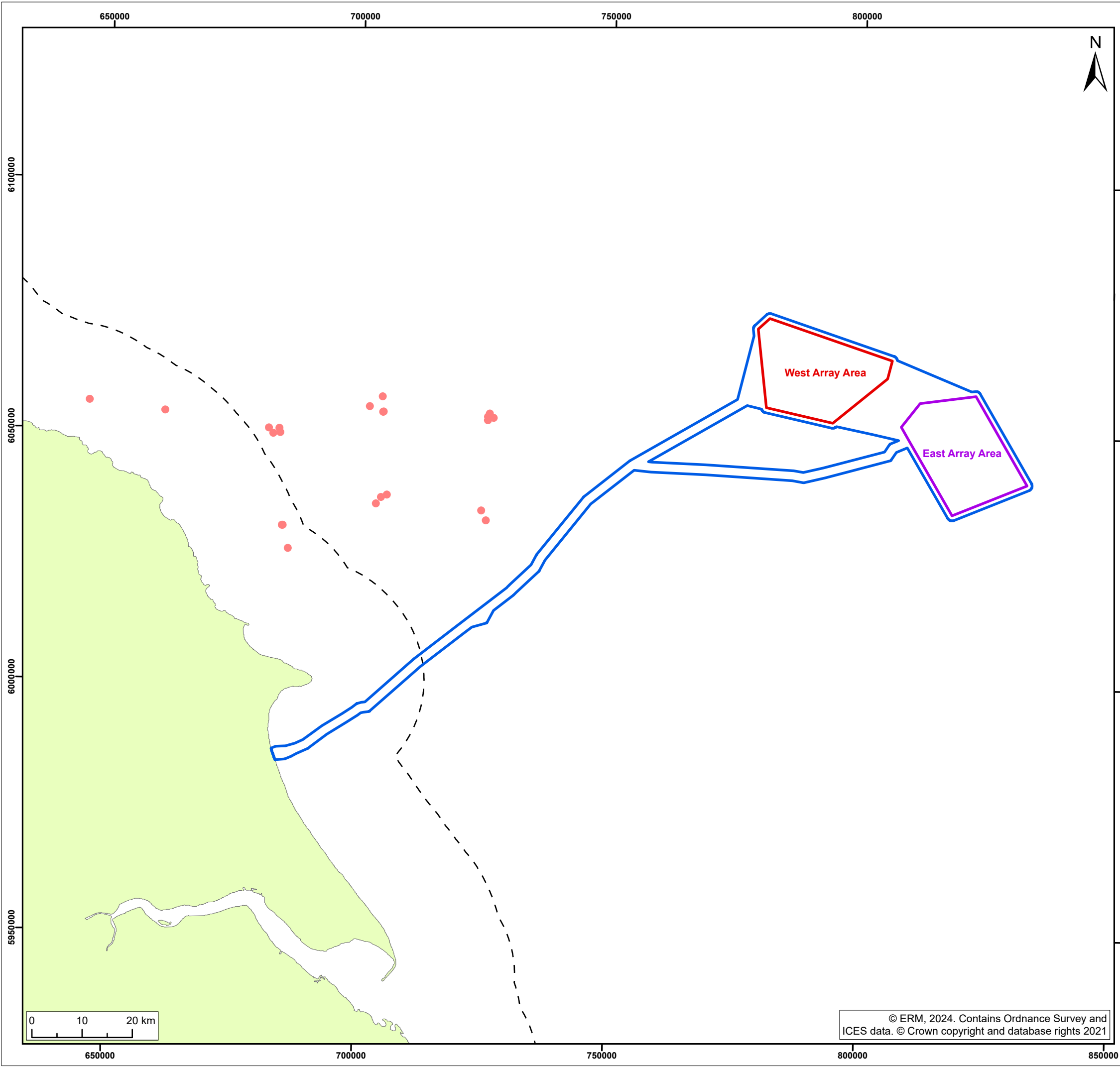
- DBS East Array Area
- DBS West Array Area
- Offshore Development Area

— - UK 12 nm limit

**IHLS Temperature**

- Greater than 13°C

|                                                                                                                                 |     |                                                        |                                                                              |                     |     |     |
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|                                                                                                                                 |     |                                                        |                                                                              |                     |     |     |
|                                                                                                                                 |     |                                                        |                                                                              |                     |     |     |
| S1                                                                                                                              | P01 | 2/20/2025                                              | J0754512-MAP-105-IHLSPre17_Greaterthan13-01                                  | MW                  | MKH |     |
| SUI                                                                                                                             | REV | DATE                                                   | DESCRIPTION                                                                  | DRW                 | CHK | APR |
| Title:                                                                                                                          |     |                                                        |                                                                              |                     |     |     |
| The Distribution of IHLS TempMaxSam data collected between 2007 and 2017, recording temperatures greater than 13 <sup>o</sup> C |     |                                                        |                                                                              |                     |     |     |
| Figure: 2-4                                                                                                                     |     | Drawing No:J0754512-MAP-105-IHLSPre17_Greaterthan13-01 |                                                                              |                     |     |     |
| Co-ordinate system:<br>WGS 1984 UTM Zone 30N                                                                                    |     |                                                        | Page Size:<br>A3                                                             | Scale:<br>1:750,000 |     |     |
| Project:<br><br>Dogger Bank South<br>Offshore Wind Farms                                                                        |     |                                                        | Report:<br><br>The Applicants' Responses<br>to Deadline 2<br>Documents - MMO |                     |     |     |



**Legend:**

**Array Area Boundary**

- DBS East Array Area
- DBS West Array Area
- Offshore Development Area

— - UK 12 nm limit

**IHLS Temperature**

- Less than 12°C

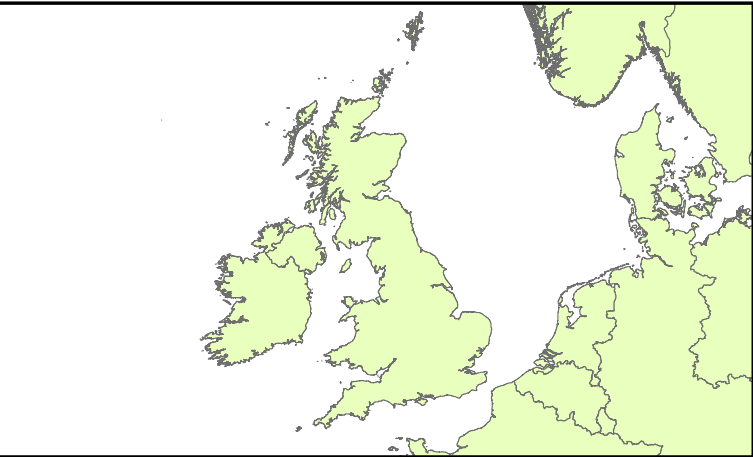
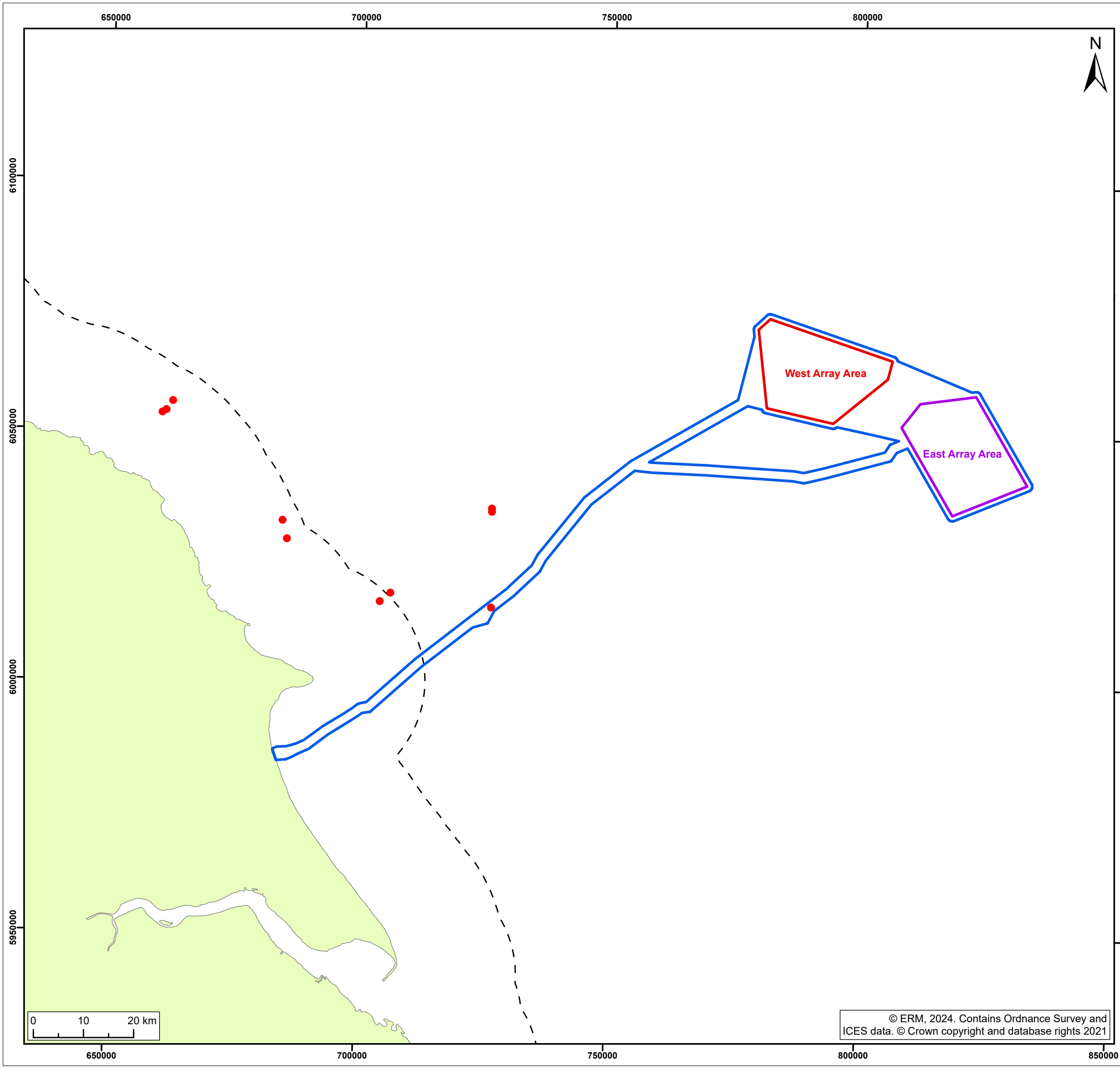
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| S1  | P01 | 2/20/2025 | J0754512-MAP-106-IHLSPost17_LessThan12-01 | MW  | MKH |     |
| SUI | REV | DATE      | DESCRIPTION                               | DRW | CHK | APR |

Title:  
The Distribution of IHLS BotTemp data collected between 2018 and 2023, recording temperatures at less than 12°C

Figure: 3-1 Drawing No: J0754512-MAP-106-IHLSPost17\_LessThan12-01

Co-ordinate system: WGS 1984 UTM Zone 30N Page Size: A3 Scale: 1:750,000

Project: Dogger Bank South Offshore Wind Farms Report: The Applicants' Responses to Deadline 2 Documents - MMO



Legend:

Array Area Boundary

- DBS East Array Area
- DBS West Array Area
- Offshore Development Area

- - UK 12 nm limit

IHLS Temperature

- 12°C to 12.8°C

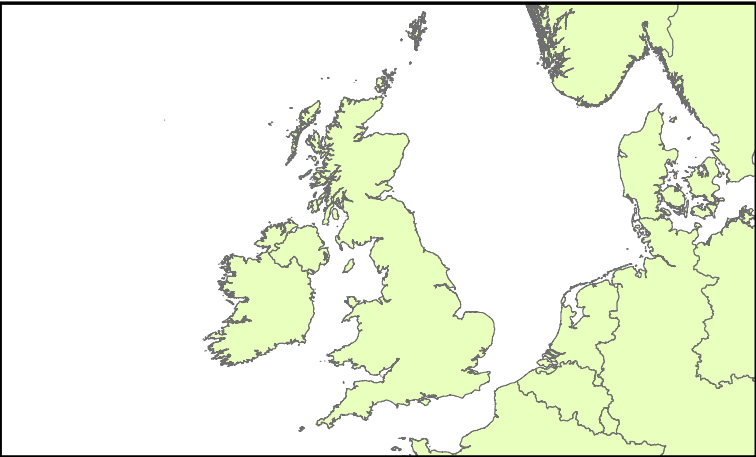
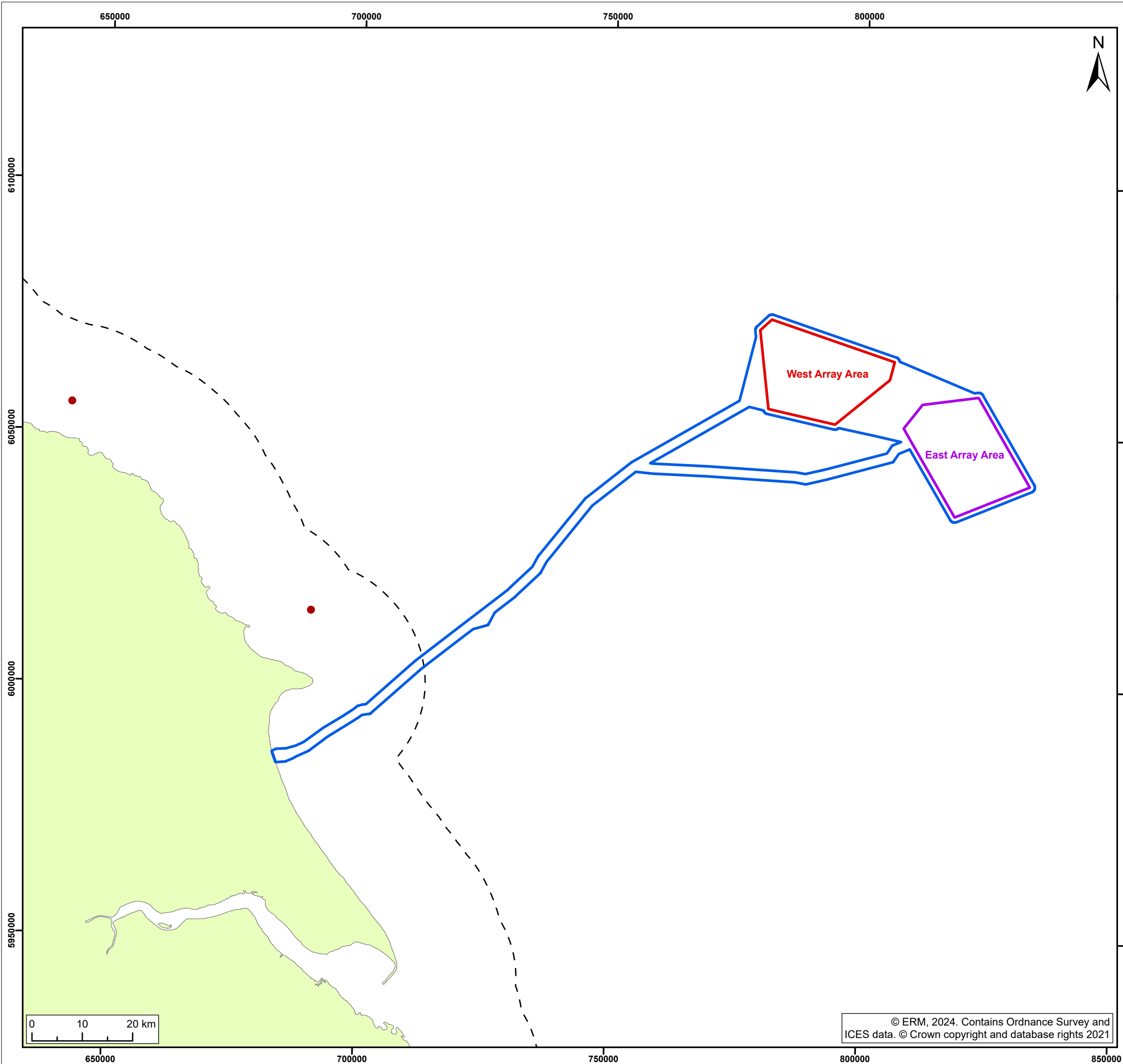
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| S1  | P01 | 2/20/2025 | J0754512-MAP-107-IHLSPost17_12to128-01 | MW  | MKH |     |
| SUI | REV | DATE      | DESCRIPTION                            | DRW | CHK | APR |

Title:  
The Distribution of IHLS BotTemp data collected between 2018 and 2023, recording temperatures between 12°C and 12.8°C

Figure: 3-2 Drawing No: J0754512-MAP-107-IHLSPost17\_12to128-01

Co-ordinate system: WGS 1984 UTM Zone 30N Page Size: A3 Scale: 1:750,000

Project: Dogger Bank South Offshore Wind Farms Report: The Applicants' Responses to Deadline 2 Documents - MMO



**Legend:**

**Array Area Boundary**

- DBS East Array Area
- DBS West Array Area
- Offshore Development Area

— - UK 12 nm limit

**IHLS Temperature**

- 12.8°C to 13°C

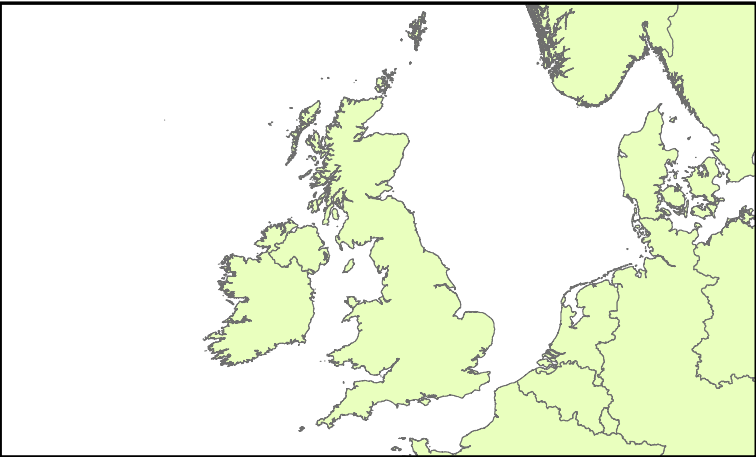
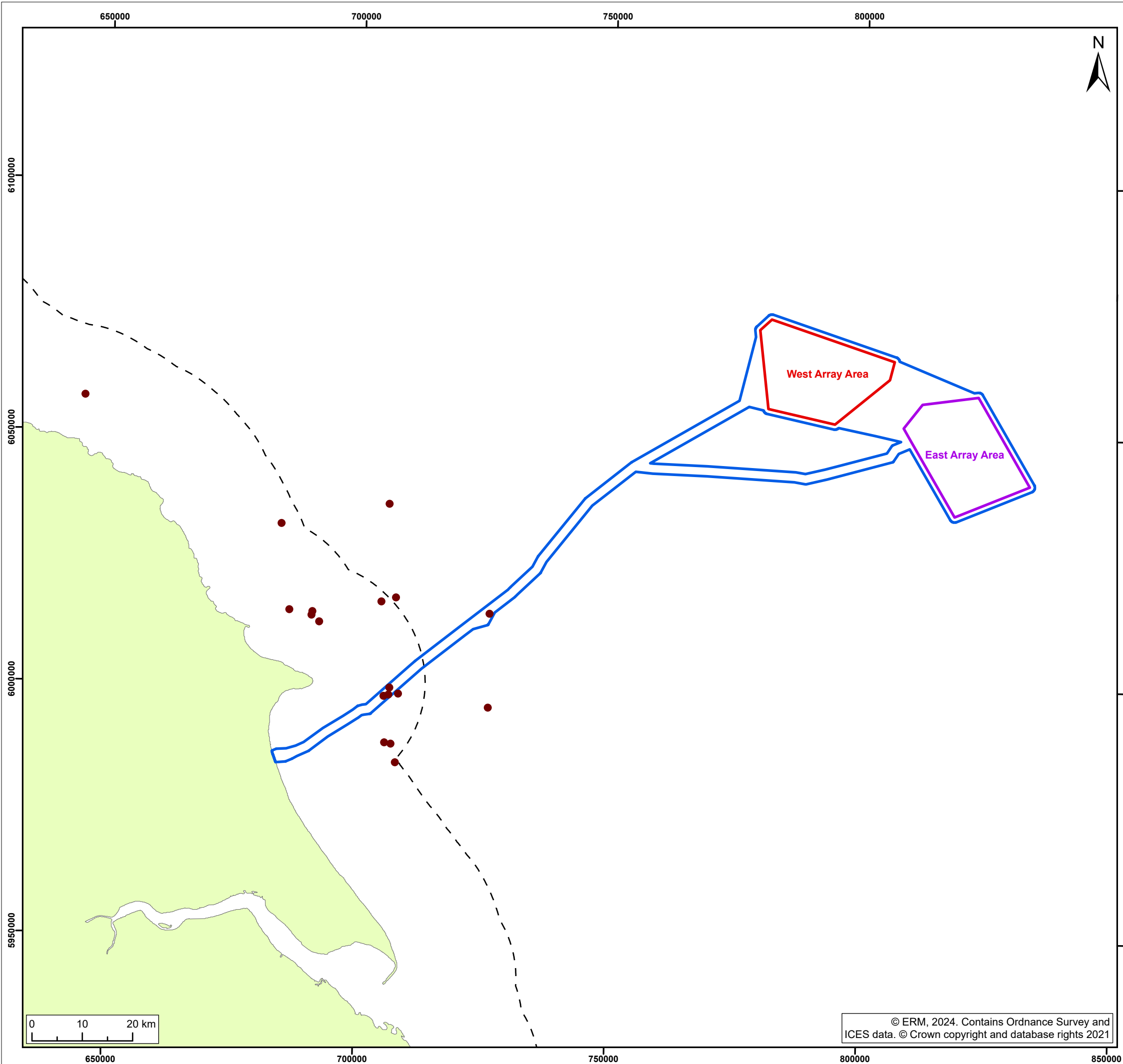
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| S1  | P01 | 2/20/2025 | J0754512-MAP-108-IHLSPost17_12.8to13-01 | MW  | MKH |     |
| SUI | REV | DATE      | DESCRIPTION                             | DRW | CHK | APR |

Title:  
The Distribution of IHLS BotTemp data collected between 2018 and 2023, recording temperatures between 12.8°C and 13°C

Figure: 3-3 Drawing No: J0754512-MAP-108-IHLSPost17\_12.8to13-01

Co-ordinate system: WGS 1984 UTM Zone 30N Page Size: A3 Scale: 1:750,000

Project: Dogger Bank South Offshore Wind Farms Report: The Applicants' Responses to Deadline 2 Documents - MMO



**Legend:**

**Array Area Boundary**

- DBS East Array Area
- DBS West Array Area
- Offshore Development Area

— - UK 12 nm limit

**IHLS Temperature**

- Greater than 13°C

|     |     |           |                                              |     |     |     |
|-----|-----|-----------|----------------------------------------------|-----|-----|-----|
|     |     |           |                                              |     |     |     |
|     |     |           |                                              |     |     |     |
|     |     |           |                                              |     |     |     |
| S1  | P01 | 2/20/2025 | J0754512-MAP-109-IHLSPost17_Greaterthan13-01 | MW  | MKH |     |
| SUI | REV | DATE      | DESCRIPTION                                  | DRW | CHK | APR |

Title:  
The Distribution of IHLS BotTemp data collected between 2018 and 2023, recording temperatures greater than 13°C

Figure: 3-4 Drawing NoJ0754512-MAP-109-IHLSPost17\_Greaterthan13-01

Co-ordinate system: WGS 1984 UTM Zone 30N Page Size: A3 Scale: 1:750,000

Project: Dogger Bank South Offshore Wind Farms Report: The Applicants' Responses to Deadline 2 Documents - MMO

# Appendix B – Fish & Shellfish Underwater Noise Memo

Appendix for REP2-061:22 and REP2-061:31 in **Table 2-3**.

**Date** 02 November 2023  
**From** <Redacted> (Senior Marine Consultant - MarineSpace)  
**To** Marine Management Organisation  
**Ref:** Dogger Bank PEIR  
**Subject** Fish & Shellfish Underwater Noise Criteria

Dear Marine Management Organisation (MMO) Team,

In MMO comments received during Technical Statutory Consultation, the following comments were received that concern underwater noise (UWN) modelling and exposure criteria for herring:

- *Given the specific spawning habitat requirements of herring and their sensitivity to underwater noise, the MMO recommends that you model and present (in mapped form) additional noise modelling for the received levels of single strike sound exposure levels (SELss) at the Flamborough Head herring spawning ground based on the 135 decibels (dB) (SELss) startle response (as per Hawkins et al. (2014)), in order to predict the range of effect for behavioural responses in herring. This is particularly important as UWN propagating from the location of the Projects in the central North Sea has potential to create an acoustic barrier to herring as they follow their migration clockwise through the central North Sea (Cushing, 2001).*
- *The 135-dB threshold is based on research by Hawkins et al., (2014a), who exposed wild schooling sprat to short sequences of repeated impulsive playback sounds at different sound pressure levels, to resemble that of a percussive pile driver. The MMO recognises that this may be a conservative threshold as the Hawkins study was carried out in Lough Hyne, which is an enclosed, quiet coastal sea loch, where fish were not accustomed to heavy disturbance from shipping and other sounds (Hawkins et al., 2014a). However, given an absence of other peer-reviewed empirical evidence of behavioural responses in clupeid fishes to support an alternative threshold for impulsive noise, Hawkins et al., (2014a) is currently considered the best available scientific evidence by the MMO, and as such 135dB is deemed an appropriate threshold for modelling behavioural responses.*

As noted in the comments above, the research presented in Hawkins et al. (2014) was carried out on a separate species (sprat) in an enclosed area where the use of powered vessels was restricted, exposure to anthropogenic noise was low, and no habituation was predicted. In the paper, the authors clearly state:

*“In this paper, data have been presented on the levels of impulsive sound to which sprat and mackerel respond. However, these data cannot yet be used to define the sound exposure criteria. More detailed studies of the behaviour of these species are required to establish whether the responses observed are likely to result in adverse effects upon the survival of individuals.”*

Further, in a follow-up paper published the same year (Popper and Hawkins, 2014), the authors reiterate:

*We would stress, however, that it would be premature to use these data to define sound exposure criteria for sprat and mackerel. Other schools of the same species, under different conditions, might respond differently.*

In the case of UWN modelling at Dogger Bank South (DBS) not only are conditions different, but the species is distinct as well. It is our opinion that to use the 50% response level of 135 dB re 1  $\mu\text{Pa}^2\text{s}$  SELss would be to intentionally misinterpret the results of the cited papers and ignore the authors' clear

conclusions. As such, we would dispute the claim that the Hawkins *et al.* (2014) research establishes the best-available scientific evidence but rather that it presents preliminary findings that will be important to establishing a more comprehensive behavioural disturbance metric in future studies. In contrast, the current assessment uses the established criteria in Popper *et al.* (2014), as this approach has been developed specifically to provide a science-based criteria for effects of anthropogenic sound (including pile driving and shipping) on fishes.

This approach is in line with industry standard and has been used and consented across a significant number of offshore renewables developments both within the region and nationally. These developments include, but not limited to, [Hornsea Project Three](#), [Hornsea Project Four](#), [East Anglia ONE North](#), and [Seagreen Alpha and Bravo](#),

Therefore, in consideration of the evidence presented, and the recommendations from the authors, it is proposed that the assessments continue to follow the original suggested approach.

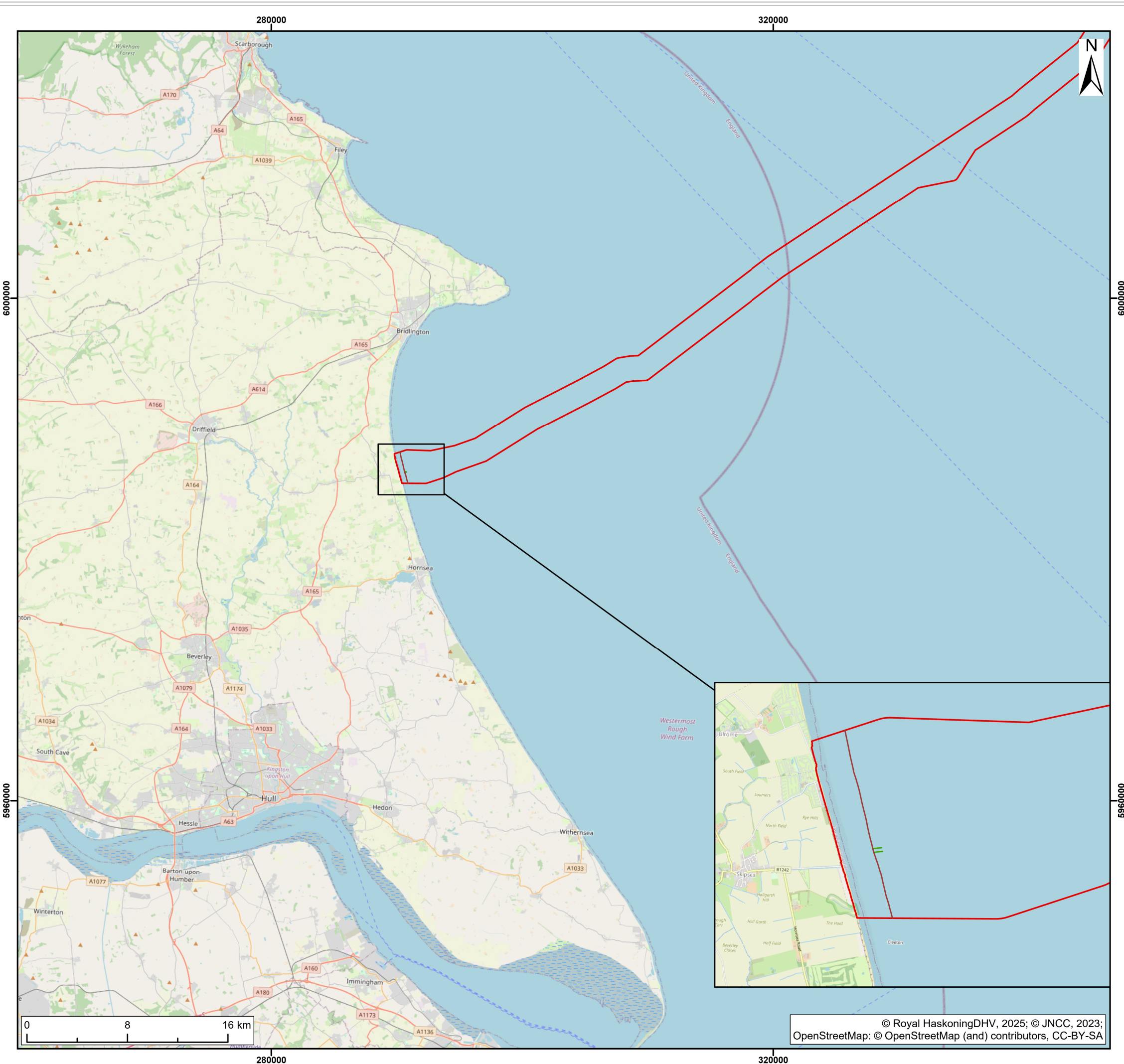
Regards,  
<Redacted>

## REFERENCES:

- Hawkins A.D., and Popper A.N. (2014). Assessing the Impact of Underwater Sounds on fishes and Other Forms of Marine Life. *Acoust. Today*, 10(2): pp. 30-41.
- Hawkins A.D., Roberts L., and Cheesman S. (2014). Responses of free-living coastal pelagic fish to impulsive sounds. *J. Acoust. Soc. Am.*, 135(5): pp. 3101-3116.
- Popper A.N., Hawkins A.D., Fay R.R., Mann D.A., Bartol S., Carlson T.J., Coombs S., Ellison W.T., Gentry R.L., Halvorsen M.B., Løkkeborg S., Rogers P.H., Southall B.L., Zeddies D.G., and Tavalga W.N. (2014). Sound Exposure Guidelines. In: ASA S3/SC1.4 TR-2014 Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report prepared by ANSI-Accredited Standards Committee S3/SC1 and registered with ANSI. SpringerBriefs in Oceanography. Springer, Cham.

# Appendix C – Indicative Worst Case Length of Cable Protection in the Nearshore

Appendix for REP2-064:2 in **Table 2-6**.



- Legend:
- Offshore Development Area
  - Indicative Worst Case Length Of Cable Protection
  - 350m Distance From Mean Low Water Springs

|     |     |            |                          |     |     |     |
|-----|-----|------------|--------------------------|-----|-----|-----|
|     |     |            |                          |     |     |     |
|     |     |            |                          |     |     |     |
| S2  | P01 | 14/03/2025 | Suitable for Information | JH  | SM  | CC  |
| SUI | REV | DATE       | DESCRIPTION              | DRW | CHK | APR |

Title:

Estimated Worst Case Length of Cable Protection in the Nearshore Environment

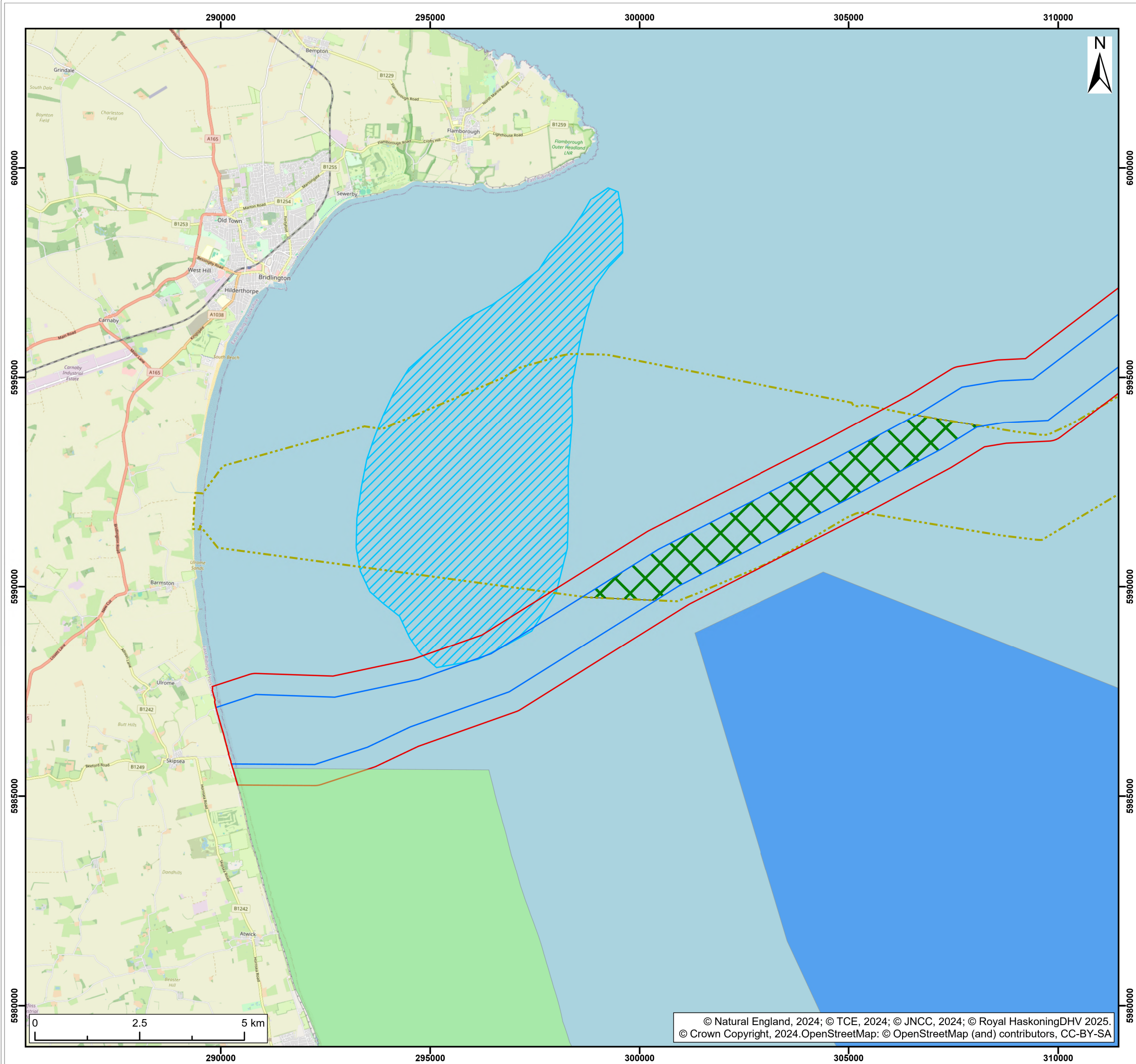
Figure: C-1      Drawing No: PC2340-RHD-OF-ZZ-DR-Z-1022

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| Co-ordinate system:<br>WGS 1984 UTM Zone 31N | Page Size:<br>A3 | Scale:<br>1:300,000 |
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|----------------------------------------------------------|--------------------------------------------------------------------------|
| Project:<br><br>Dogger Bank South<br>Offshore Wind Farms | Report:<br><br>13.3 The Applicants' Responses<br>to Deadline 2 Documents |
|----------------------------------------------------------|--------------------------------------------------------------------------|

# Appendix D – Indicative Location of Hornsea Project Four Cable Crossings

Appendix for REP2-069:B28 in **Table 2-12**.



Legend:

- Offshore Development Area
- Offshore Export Cable Corridor
- Smithic Bank (as delimited by JNCC)
- Holderness Inshore Marine Conservation Zone
- Holderness Offshore Marine Conservation Zone
- Hornsea Project 4 Export Cable Route
- Potential Cable Crossing Location

|     |     |            |                          |     |     |     |
|-----|-----|------------|--------------------------|-----|-----|-----|
|     |     |            |                          |     |     |     |
|     |     |            |                          |     |     |     |
|     |     |            |                          |     |     |     |
| S2  | P01 | 18/03/2025 | Suitable for Information | JH  | SM  | CC  |
| SUI | REV | DATE       | DESCRIPTION              | DRW | CHK | APR |

Title:

Indicative Location of Hornsea Project Four Cable Crossings

Figure: D-1

Drawing No: PC2340-RHD-OF-ZZ-DR-Z-1026

|                                                   |                                                              |                    |
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| Co-ordinate system:<br>WGS 1984 UTM Zone 31N      | Page Size:<br>A3                                             | Scale:<br>1:90,000 |
| Project:<br>Dogger Bank South Offshore Wind Farms | Report:<br>The Applicants' Responses to Deadline 2 Documents |                    |

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