



Planning Inspectorate

The Planning Act 2008

## **Morgan Offshore Wind Project: Generation Assets**

Examining Authority's Report  
of Findings and Conclusions  
and

Recommendation to the Secretary of State for  
Energy Security and Net Zero

---

### Examining Authority

**Susan Hunt** BA (Hons) MA MRTPI, Panel Lead

**Janine Laver** BA (Hons) MSc PGDL MRTPI

**Stephen Bradley** BA (Hons) DipArch MA MSc ARB RIBA

29 May 2025

[This page is intentionally blank]



## Planning Inspectorate

### ERRATA SHEET – Morgan Offshore Wind Project: Generation Assets - Ref. EN010136

Examining Authority's Report of Findings and Conclusions and Recommendation  
to the Secretary of State for the Department of Energy Security and Net Zero,  
dated 29 May 2025.

Corrections agreed by the Examining Authority prior to a decision being made

| Vol | PDF<br>Page<br>No. | Para   | Error                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Correction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----|--------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 38                 | 3.5.17 | <i>The Aviation and Radar Technical Report within the ES includes as Appendix B an Obstacle Limitation Surface (OLS) and IFP Assessment that concludes that there would be no impact from the Proposed Development on Blackpool Airport OLS and IFPs with the exception of minimum sector altitude (MSA) for one sector approach, which would need the minimum obstacle clearance area to be increased from 2000 ft to 2200 ft (Appendix B, page 212 [APP-045]).</i> | <i>The Aviation and Radar Technical Report within the ES includes as Appendix B an <b>Impact Assessment for Obstacle Limitation Surfaces (OLS) and Instrument Flight Procedures (IFPs) for Morgan and Mona Offshore Wind Projects</b> that concludes that there would be no impact from the <b>Projects</b> on Blackpool Airport OLS and IFPs with the exception of minimum sector altitude (MSA) for one sector approach, which would need the minimum obstacle clearance area to be increased from 2000 ft to 2200 ft (Appendix B, pages 193 and 212 [APP-045])</i> |

# OVERVIEW

**File Ref: EN010136**

The Application dated 24 April 2024 was made under s37 of the Planning Act 2008 and was received in full by the Planning Inspectorate on 24 April 2024.

The Applicant is Morgan Offshore Wind Limited.

The Application was accepted for Examination on 17 May 2024.

The Examination of the Application began on 10 September 2024 and was completed on 10 March 2025.

The Proposed Development comprises a Development Consent Order Application for the construction of an offshore wind farm with an approximate capacity of 1500MW in the Irish Sea awarded as part of the Round 4 Offshore Wind Licensing Arrangements. The key components of the Proposed Development include:

- Offshore wind turbines
- Offshore Substation Platforms (OSPs)
- Foundations (for wind turbines and OSPs)
- Scour protection
- Cable protection
- Inter-array cables linking the individual turbines to the OSPs
- Offshore interconnector cables linking OSPs to each other

The Proposed Development does not include the Transmission Assets which form a separate Development Consent Order application to connect the Generation Assets to the power distribution grid onshore.

## **Summary of Recommendation:**

The Examining Authority recommends that the Secretary of State should make the Order in the form attached to Appendix D of this Recommendation Report.

# REPORT TABLE OF CONTENTS

|       |                                                                               |     |
|-------|-------------------------------------------------------------------------------|-----|
| 1.    | INTRODUCTION.....                                                             | 1   |
| 1.1.  | BACKGROUND TO THE EXAMINATION.....                                            | 1   |
| 1.2.  | APPOINTMENT OF THE EXAMINING AUTHORITY .....                                  | 1   |
| 1.3.  | THE APPLICATION.....                                                          | 1   |
| 1.4.  | THE EXAMINATION .....                                                         | 5   |
| 1.5.  | OTHER CONSENTS .....                                                          | 8   |
| 1.6.  | OUTSTANDING MATTERS AT THE CLOSE OF THE EXAMINATION .....                     | 8   |
| 1.7.  | STRUCTURE OF THIS REPORT.....                                                 | 8   |
| 2.    | HOW THE APPLICATION IS DETERMINED .....                                       | 9   |
| 2.1.  | INTRODUCTION .....                                                            | 9   |
| 2.2.  | LEGISLATION AND POLICY.....                                                   | 9   |
| 2.3.  | NATIONAL POLICY STATEMENTS.....                                               | 10  |
| 2.4.  | OTHER RELEVANT NATIONAL POLICIES .....                                        | 11  |
| 2.5.  | LOCAL IMPACT REPORTS .....                                                    | 11  |
| 2.6.  | ENVIRONMENTAL IMPACT ASSESSMENT .....                                         | 11  |
| 2.7.  | HABITATS REGULATIONS ASSESSMENT .....                                         | 12  |
| 2.8.  | TRANSBOUNDARY EFFECTS .....                                                   | 12  |
| 3.    | THE PLANNING ISSUES .....                                                     | 14  |
| 3.2.  | THE PRINCIPLE OF THE DEVELOPMENT.....                                         | 15  |
| 3.3.  | SITE SELECTION AND ALTERNATIVES .....                                         | 20  |
| 3.4.  | GRID CONNECTION AND OTHER IRISH SEA PROJECTS .....                            | 25  |
| 3.5.  | AVIATION AND RADAR.....                                                       | 34  |
| 3.6.  | COMMERCIAL FISHERIES.....                                                     | 55  |
| 3.7.  | FISH AND SHELLFISH ECOLOGY .....                                              | 74  |
| 3.8.  | MARINE MAMMALS.....                                                           | 89  |
| 3.9.  | ORNITHOLOGY .....                                                             | 111 |
| 3.10. | PHYSICAL PROCESSES AND BENTHIC ECOLOGY .....                                  | 126 |
| 3.11. | SHIPPING AND NAVIGATION .....                                                 | 146 |
| 3.12. | OTHER OFFSHORE INFRASTRUCTURE AND SEA USERS.....                              | 176 |
| 3.13. | OTHER CONSIDERATIONS .....                                                    | 210 |
| 3.14. | GOOD DESIGN .....                                                             | 231 |
| 4.    | SUMMARY OF CONCLUSIONS IN RELATION TO HABITATS REGULATIONS<br>ASSESSMENT..... | 233 |
| 4.1.  | INTRODUCTION .....                                                            | 233 |
| 4.2.  | SUMMARY OF MATTERS CONSIDERED DURING THE EXAMINATION .....                    | 233 |
| 4.3.  | REPORT ON THE IMPLICATIONS FOR EUROPEAN SITES AND CONSULTATION ...            | 234 |
| 4.4.  | SUMMARY OF FINDINGS IN RELATION TO LIKELY SIGNIFICANT EFFECTS .....           | 234 |
| 4.5.  | SUMMARY OF FINDINGS IN RELATION TO ADVERSE EFFECTS ON INTEGRITY....           | 235 |
| 4.6.  | HRA CONCLUSIONS .....                                                         | 237 |
| 5.    | CONCLUSION ON THE CASE FOR DEVELOPMENT CONSENT .....                          | 238 |
| 5.1.  | INTRODUCTION .....                                                            | 238 |
| 5.2.  | THE PLANNING BALANCE.....                                                     | 238 |

|                                                                                                                          |                                                                                           |       |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------|
| 5.3.                                                                                                                     | FINDINGS AND CONCLUSIONS ON THE PLANNING BALANCE .....                                    | 243   |
| 6.                                                                                                                       | DRAFT DEVELOPMENT CONSENT ORDER AND RELATED MATTERS.....                                  | 246   |
| 6.1.                                                                                                                     | INTRODUCTION .....                                                                        | 246   |
| 6.2.                                                                                                                     | THE ORDER AS APPLIED FOR .....                                                            | 246   |
| 6.3.                                                                                                                     | EXAMINATION AND EVOLUTION OF THE DEVELOPMENT CONSENT ORDER.....                           | 247   |
| 6.4.                                                                                                                     | MAIN ISSUES ARISING AND EXAMINING AUTHORITY'S CONSIDERATION .....                         | 254   |
| 6.5.                                                                                                                     | ExA's RECOMMENDED CHANGES .....                                                           | 266   |
| 6.6.                                                                                                                     | CONCLUSIONS .....                                                                         | 280   |
| 7.                                                                                                                       | SUMMARY OF FINDINGS AND CONCLUSIONS .....                                                 | 281   |
| 7.1.                                                                                                                     | INTRODUCTION .....                                                                        | 281   |
| 7.2.                                                                                                                     | CONSIDERATION OF FINDINGS AND CONCLUSIONS .....                                           | 281   |
| 7.3.                                                                                                                     | RECOMMENDATION .....                                                                      | 282   |
| APPENDIX A: REFERENCE TABLES .....                                                                                       |                                                                                           | II    |
| APPENDIX A1: Environmental Statement .....                                                                               |                                                                                           | II    |
| APPENDIX A2: Statements of Common Ground between the Applicant and Interested Parties at the end of the Examination..... |                                                                                           | V     |
| APPENDIX A3: Summary of Relevant Policy, Guidance and Statements.....                                                    |                                                                                           | VI    |
| APPENDIX A4: Summary of Relevant Legislation for the Proposed Development.....                                           |                                                                                           | VII   |
| APPENDIX A5: Other Made Development Consent Orders referred to by the Applicant and other Interested Parties .....       |                                                                                           | IX    |
| APPENDIX B: LIST OF ABBREVIATIONS.....                                                                                   |                                                                                           | X     |
| APPENDIX C: HABITATS REGULATIONS ASSESSMENT .....                                                                        |                                                                                           | XVII  |
| C.1                                                                                                                      | INTRODUCTION .....                                                                        | XVII  |
| C.2                                                                                                                      | STAGE 1: FINDINGS IN RELATION TO LIKELY SIGNIFICANT EFFECTS.....                          | XXI   |
| C.3                                                                                                                      | CONSERVATION OBJECTIVES .....                                                             | XXVI  |
| C.4                                                                                                                      | STAGE 2: FINDINGS IN RELATION TO ADVERSE EFFECTS ON INTEGRITY .....                       | XXVII |
| C.5                                                                                                                      | HRA CONCLUSIONS .....                                                                     | XLIX  |
| C.6                                                                                                                      | HRA SUB-APPENDIX: OFFSHORE ORNITHOLOGY – CHRONOLOGICAL OVERVIEW OF KEY HRA DOCUMENTS..... | L     |
| APPENDIX D: THE RECOMMENDED DCO.....                                                                                     |                                                                                           | LIV   |

## List of Figures

|                                                                                            |    |
|--------------------------------------------------------------------------------------------|----|
| Figure 1: Location Plan.....                                                               | 2  |
| Figure 2: Other Offshore Windfarms and Cable Routes .....                                  | 3  |
| Figure 3: Carbon Capture, Oil and Gas Activities .....                                     | 4  |
| Figure 4: Morgan Generation Assets Agreement for Lease Area .....                          | 22 |
| Figure 5: Crown Estate Round 4 Bidding Area 4 Constraints .....                            | 23 |
| Figure 6: Interrelationship of Morgan Generation Assets with other infrastructure projects | 28 |

|                                                                                                                                                                              |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Figure 7: Aviation and radar study area.....                                                                                                                                 | 35  |
| Figure 8: Airspace construction in the vicinity of the Proposed Development.....                                                                                             | 37  |
| Figure 9: Winter 2023 survey data of fishing activity within and around the Proposed Development .....                                                                       | 57  |
| Figure 10: Scallop Mitigation Zone as developed in the Outline Fisheries Liaison and Co-Existence Plan .....                                                                 | 57  |
| Figure 11: Location plots (VMS data) of two WCSP vessels engaged in queen scallop fishing through 2023 .....                                                                 | 60  |
| Figure 12: BA4 2015-2021_Queen Scallop fishing Morgan - WCSP screen-shot data plot                                                                                           | 62  |
| Figure 13: Irish Sea queen scallop fishing grounds identified from evidence gathered by ERM .....                                                                            | 63  |
| Figure 14: Pelagic fishing plotter data 1994 to 2023.....                                                                                                                    | 69  |
| Figure 15: 'Multi-Use aquaculture and wind production' schematic diagram submitted by Bodorgan Marine Limited .....                                                          | 71  |
| Figure 16: Fish and Shellfish Ecology Study Area.....                                                                                                                        | 76  |
| Figure 17: Fish and Shellfish Ecology CEA .....                                                                                                                              | 82  |
| Figure 18: Marine Mammal Study Area.....                                                                                                                                     | 90  |
| Figure 19: Marine Mammal Study Area/ Relevant Species MUs for Cetacean Species .....                                                                                         | 91  |
| Figure 20: Marine Mammal Study Area/ Relevant Species MUs for Pinniped Species .....                                                                                         | 92  |
| Figure 21: Marine Mammals CEA .....                                                                                                                                          | 98  |
| Figure 22: Offshore ornithology study area .....                                                                                                                             | 113 |
| Figure 23: Physical Processes Study Area.....                                                                                                                                | 127 |
| Figure 24: Benthic Subtidal Ecology Study Area .....                                                                                                                         | 128 |
| Figure 25: Indicative Cable Crossings .....                                                                                                                                  | 140 |
| Figure 26: Busiest day vessel traffic surveys, winter 2021 and summer 2022 .....                                                                                             | 149 |
| Figure 27: Deviations to adverse-weather ferry routes with cumulative projects (excluding Moir Vannin OWF) .....                                                             | 152 |
| Figure 28: Moir Vannin OWF preliminary boundary in relation to the Proposed Development and to the existing Walney Extension OWF.....                                        | 153 |
| Figure 29: The 'gap' between the Proposed Development and the proposed Moir Vannin and existing Walney Extension OWFs .....                                                  | 160 |
| Figure 30: Commercial vessel transits through the sea space between the Proposed Development and the proposed Moir Vannin and existing Walney Extension OWFs.....            | 160 |
| Figure 31: Context for additional bridge simulation Run 03 .....                                                                                                             | 161 |
| Figure 32: Example of radar plots in May 2023 on board an IOMSPC ferry encountering multiple vessels in and adjacent to IoM waters.....                                      | 165 |
| Figure 33: Illustration of multiple course changes needed for Stena ferries to pass to the east of the IoM in adverse weather between Liverpool or Heysham and Belfast ..... | 173 |

|                                                                                                           |     |
|-----------------------------------------------------------------------------------------------------------|-----|
| Figure 34: Other offshore wind farms and cables within the vicinity of the Morgan Generation Assets ..... | 178 |
| Figure 35: Distances to Ørsted IPs OWFs.....                                                              | 189 |
| Figure 36: SLVIA Study Area .....                                                                         | 220 |
| Figure 37: Zone of Theoretical Visibility and representative viewpoint locations .....                    | 221 |

## List of Tables

|                                                                                                                                          |     |
|------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Table 1: PSR sites within the study area .....                                                                                           | 36  |
| Table 2: Potential number of animals predicted to be disturbed as a result of different piling scenarios .....                           | 95  |
| Table 3: Offshore wind farms in the east Irish Sea .....                                                                                 | 179 |
| Table 4: Summary of the results of the Wood Thilsted wake impact assessment report (the main scenarios normalised to the baseline) ..... | 198 |
| Table 5: Indicative annual energy losses – Morgan only .....                                                                             | 199 |
| Table 6: Indicative annual energy losses – Cumulative .....                                                                              | 199 |
| Table 7: Summary of the results of the Wood Thilsted wake impact assessment report (the main scenarios normalised to the baseline) ..... | 200 |
| Table 8: Summary of findings in the planning balance .....                                                                               | 244 |
| Table 9: Draft Development Consent Order documentation submitted into the Examination .....                                              | 247 |
| Table 10: Notable changes made to the draft Development Consent Order .....                                                              | 249 |
| Table 11: DCO Provisions Recommended to be Changed .....                                                                                 | 267 |



# **1. INTRODUCTION**

## **1.1. BACKGROUND TO THE EXAMINATION**

- 1.1.1. An application for the Morgan Offshore Wind Project: Generation Assets (the Proposed Development), Planning Inspectorate reference EN010136, was submitted by Morgan Offshore Wind Limited (the Applicant) to the Planning Inspectorate on 24 April 2024 under section (s) 37 of the Planning Act 2008 (PA2008) and accepted for Examination under s55 of the PA2008 on 17 May 2024 [\[PD-006\]](#). This Examining Authority (ExA) recommendation report ('the Report') sets out the ExA's findings, conclusions and recommendations to the Secretary of State for Energy Security and Net Zero (hereafter referred to as the SoS).
- 1.1.2. The legislative tests for whether the Proposed Development is a Nationally Significant Infrastructure Project (NSIP) were considered by the then SoS for Levelling Up, Housing and Communities in its decision to accept the Application for Examination in accordance with s55 of the PA2008 [\[PD-006\]](#).
- 1.1.3. The Proposed Development is an offshore wind generating station with an electrical output capacity of over 100MW. The Proposed Development falls within s15(3) of PA2008 and meets the definition of an NSIP set out in s14(1)(a) of the PA2008. As such, the Proposed Development requires development consent in accordance with s31 of PA2008.
- 1.1.4. The [Examination Library](#) provides a record of all application documents and submissions to the Examination, each of which is given a unique reference number, for example [APP-001]. The reference numbers are used throughout this Report and hyperlinks are included to allow the reader to access them directly.
- 1.1.5. This Report does not contain extensive summaries of the documents and representations received. Readers are referred to relevant material using linked Examination Library references. Full regard has been had to all such material and to all important and relevant matters arising from it in all conclusions drawn by the ExA in this Report.

## **1.2. APPOINTMENT OF THE EXAMINING AUTHORITY**

- 1.2.1. On 20th June 2024, Susan Hunt, Janine Laver, and Stephen Bradley were appointed as the ExA for the Application under s61 and s65 of PA2008 [\[PD-007\]](#). Susan Hunt was appointed as the Lead Member of the ExA.

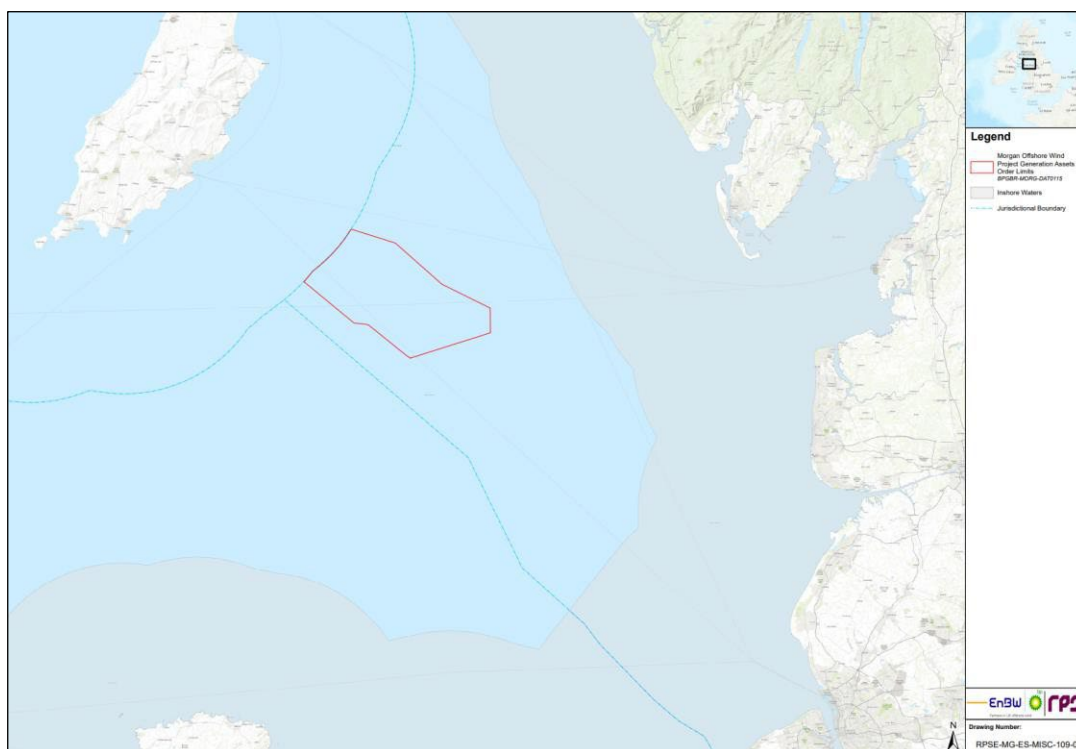
## **1.3. THE APPLICATION**

### **Location of the proposed development**

- 1.3.1. The Proposed Development is located entirely within the Exclusive Economic Zone (EEZ) of the United Kingdom in the east Irish Sea, adjacent to the boundary with the territorial sea of the Isle of Man (IoM). At its closest point the Proposed Development wind turbine generator (WTG) array area would be located approximately 58.5 km (31.6 nm) from the Anglesey coastline, 37.13 km (20.1 nm) from the northwest coast of England, and 22.22 km (12 nm) from the IoM.
- 1.3.2. The location of the Proposed Development and its proposed order limits are shown in the Location Plan [\[APP-080\]](#) at Figure 1 below and the final version of the Land

Plan as amended [\[AS-007\]](#). All of the land within the proposed order limits is EEZ seabed that is subject to an Agreement for Lease with The Crown Estate.

**Figure 1: Location Plan<sup>1</sup>**



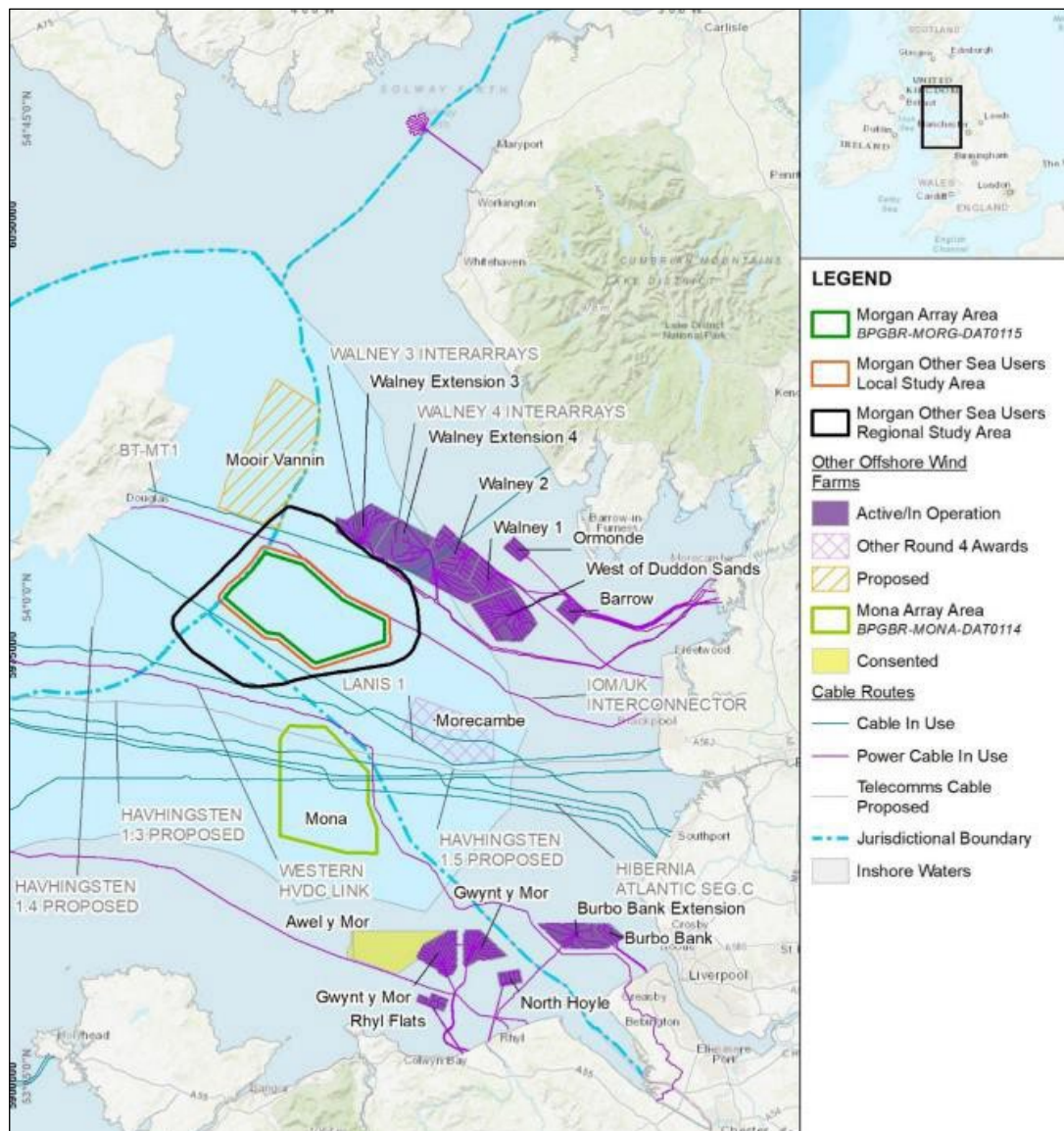
1.3.3.

The Environmental Statement (ES) Volume 2, Chapter 9: Other Sea Users [\[APP-027\]](#), updated in [\[REP6-035\]](#) provides a description of other infrastructure and users in the east Irish Sea in the context of the location of the Proposed Development, as can be seen in Figures 2 and 3 below. The spatial context is characterised by:

- Existing offshore windfarms
- Undersea cables in use
- Proposed wind farm developments to the north, south and southeast of the Proposed Development
- The jurisdictional boundaries of England, Wales, Scotland, and the IoM
- The Other Sea Users impact assessment 'Local Study Area' and 'Regional Study Area' around the Proposed Development
- Hydrocarbon platforms (Figure 3), some of which are unmanned and some in process of decommissioning

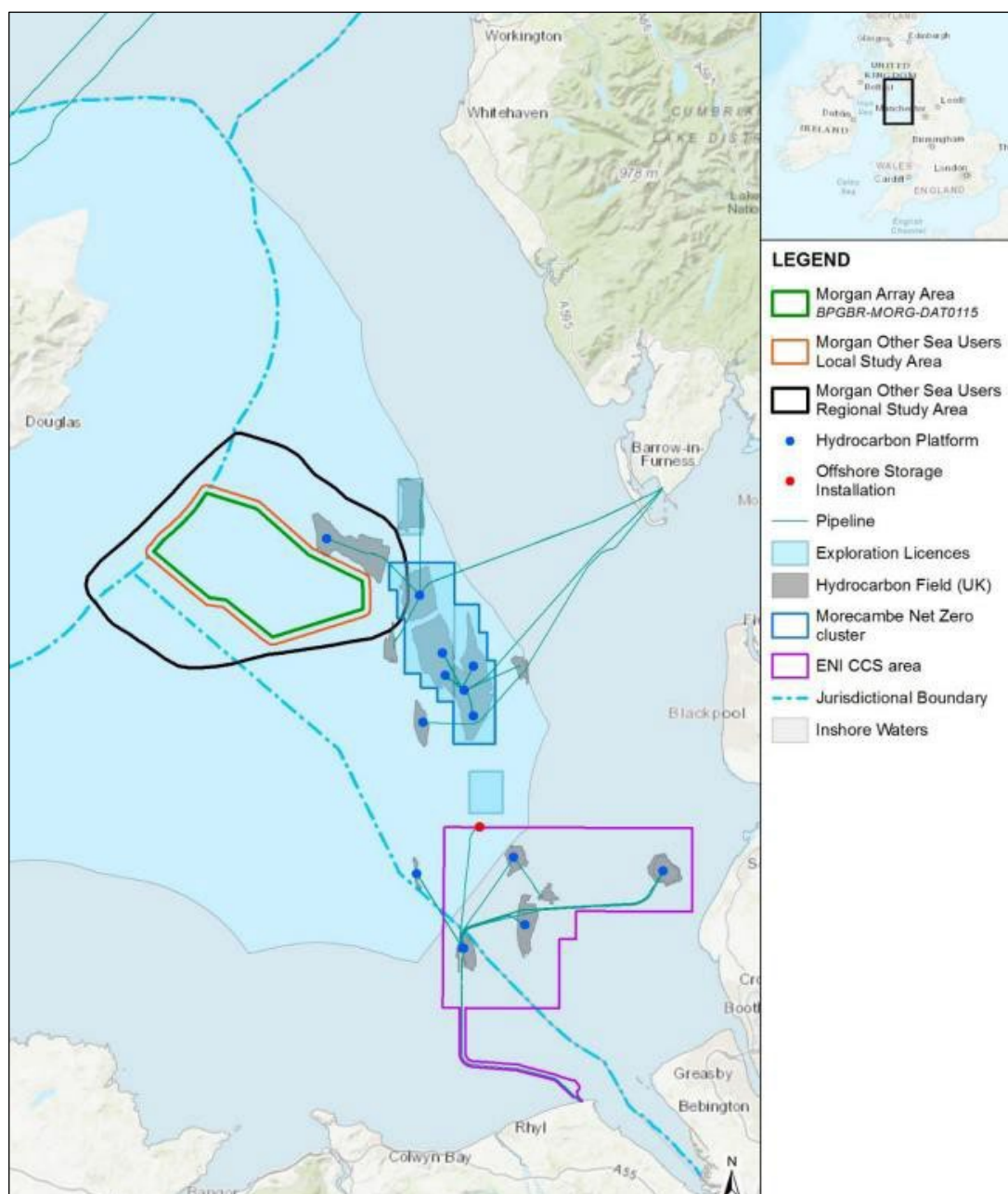
<sup>1</sup> Source: Location Plan [\[APP-080\]](#) – do not scale.

**Figure 2: Other Offshore Windfarms and Cable Routes<sup>2</sup>**



<sup>2</sup> Source: ES Volume 2, Chapter 9, Figure 9.4 [APP-027]

**Figure 3: Carbon Capture, Oil and Gas Activities<sup>3</sup>**



### Description of the proposed development

- 1.3.4. The Proposed Development is an offshore generating station with a capacity greater than 100MW located wholly in English waters, a NSIP as defined by s15(3) of the Planning Act 2008 (as amended) (PA2008).
- 1.3.5. The Morgan Offshore Wind Project together with the Morecambe Offshore Windfarm (Planning Inspectorate reference EN010121) were included in the Pathways to 2030 workstream under the Offshore Transmission Network Review, within which the National Grid Electricity System Operator conducted a Holistic Network Design Review to assess options to improve the coordination of offshore wind generation connections and transmission networks. The output of this process

<sup>3</sup> Source: ES Volume 2, Chapter 9, Figure 9.6 in [\[APP-027\]](#) – do not scale.



concluded that the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm should work collaboratively on a coordinated grid connection at Penwortham in Lancashire, to be delivered as part of a separate transmission assets application for development consent. The Applicant's Planning Statement [\[APP-074\]](#) explains that the two project developers made a successful application to the SoS for a direction under s35 of the PA2008 to pursue consent through the Development Consent Order (DCO) process for the joint transmission assets (covering both offshore and onshore transmission infrastructure). The joint Morgan and Morecambe Offshore Wind Farms Transmissions Assets (the Transmission Assets) application (Planning Inspectorate reference EN020028) was accepted for examination on 18 November 2024 and the examination commenced on 29 April 2025.

1.3.6. Therefore, and for the avoidance of doubt, the Proposed Development is separate from development proposals to provide the onshore grid connection (the Transmission Assets).

1.3.7. The Proposed Development works comprise:

- Work No. 1 – up to 96 wind turbine generators
- Work No. 2 – up to four offshore substation platforms
- Work No. 3 – a network of subsea interconnector cables between the offshore substation platforms including cable crossings and cable protection

1.3.8. Further details of the proposal for each Work No. can be found in Schedule 1 of the recommended DCO in [Appendix D](#) of this Report.

1.3.9. The Applicant would produce a layout of infrastructure for post-consent, pre-construction agreement with the Marine Management Organisation (MMO) and its advisors including the Maritime and Coastguard Agency (MCA). Relevant planning history

1.3.10. As a wholly offshore development proposal, there is no relevant planning history within the order limits. There are, however, a number of other DCO applications for offshore wind farms and associated transmission infrastructure currently being considered in and around the Irish Sea, including:

- Mona Offshore Wind Farm (examination closed 16 January 2025; recommendation submitted to the SoS 16 April 2025)
- Morecambe Offshore Wind Farm Generation Assets (examination closed 23 April 2025)
- Morgan and Morecambe Offshore Wind Farms Transmission Assets (examination commenced 29 April 2025)

1.3.11. A Section 35 Direction was issued for the East Irish Sea Transmission Project associated with the proposed Mooir Vannin Offshore Wind Farm (OWF) by the SoS for Energy Security and Net Zero on 17 October 2024. At the time of closing the Examination, a Marine Infrastructure Consent application for the proposed Mooir Vannin OWF was expected to be submitted to the IoM government in March 2025.

## 1.4. THE EXAMINATION

### Local authorities

1.4.1. Following acceptance of the application for Examination, Relevant Representations (RR) were received from Fylde Borough Council [\[RR-001\]](#) and Liverpool City

Region Combined Authority [\[RR-002\]](#) both under the mistaken impression that this application also concerned energy transmission at landfall and onshore. Those RRs were not subsequently pursued in this Examination.

### **Start of the examination**

- 1.4.2. The Preliminary Meeting (PM) took place in person on 10 September 2024 [\[EV1-004\]](#). The ExA's procedural decisions and the examination timetable took full account of matters raised at the PM. They were provided in the Rule 8 Letter dated 12 September 2024 [\[PD-002\]](#).
- 1.4.3. The Isle of Man Government ('IoM government') also submitted a RR [\[RR-015\]](#) and subsequently participated in the PM and actively throughout the Examination, represented by its Territorial Sea Committee (IoM TSC). The ExA asked questions about its status as an Interested Party (IP) and was satisfied that whilst the IoM is not part of the UK, it was agreed as mutually satisfactory for the IoM to be treated for the purposes of Environmental Impact Assessment and the DCO examination as if it were a UK unitary local authority rather than as a transboundary entity. The IoM TSC was therefore admitted as an IP and was invited to submit a Local Impact Report (LIR), which was subsequently received into the Examination as [\[REP1-047\]](#).
- 1.4.4. The Examination began on 10 September 2024 (following the PM) and concluded on 10 March 2025. The principal components of and events around the Examination can be seen in the [Examination Timetable](#) and are summarised below.

### **Procedural decisions**

- 1.4.5. The Procedural Decisions taken by the ExA are recorded in the Examination Library referenced [\[PD-xxx\]](#). They detail the ExA's decisions relating to the procedure of the Examination and did not bear on the ExA's consideration of the planning merits of the Proposed Development.

### **Statements of common ground**

- 1.4.6. By the end of the Examination, the following bodies had concluded and signed Statements of Common Ground (SoCG) with the Applicant:
- BAE Systems (Walney Aerodrome) [\[REP6-074\]](#)
  - Blackpool Airport [\[REP6-073\]](#)
  - Corporation of Trinity House of Deptford Strond [\[REP6-088\]](#)
  - Defence Infrastructure Organisation [\[REP6-076\]](#)
  - Fisheries Stakeholders [\[REP6-084\]](#)
  - Historic England [\[REP6-077\]](#)
  - Isle of Man Airport (Ronaldsway) [\[REP6-085\]](#)
  - Isle of Man Government (Territorial Sea Committee) [\[REP6-079\]](#)
  - Isle of Man Steam Packet Company [\[REP6-078\]](#)
  - Marine Management Organisation [\[REP6-081\]](#)
  - Maritime and Coastguard Agency [\[REP6-080\]](#)
  - Mooir Vannin Offshore Wind Farm Limited [\[REP6-082\]](#)
  - National Federation of Fishermen's Organisations, Welsh Fishermen's Association and Whitehaven Fishermen's Cooperative [\[REP5-053\]](#)
  - Natural Resources Wales [\[REP6-083\]](#).
  - NATS (En Route) plc [\[REP5-052\]](#)
  - Royal Society for the Protection of Birds [\[REP6-086\]](#)
  - Stena Line [\[REP6-087\]](#)

- UK Chamber of Shipping [\[REP6-075\]](#)

1.4.7. The SoCGs with the following bodies remained unsigned at the end of the Examination:

- Chrysaor Resources (Irish Sea) Harbour Energy [\[REP1-031\]](#)
- Ørsted Interested Parties [\[REP2-027\]](#)

1.4.8. No SoCG was submitted with Natural England. Natural England noted in its response to the ExA's Rule 6 letter [\[PD1-020\]](#) that due to resourcing issues it would focus instead on a Principal Areas of Disagreement Summary Statement (PADSS) and a Risk and Issues Log, both of which were initially submitted as part of its RR [\[RR-026\]](#) and Written Representation [\[REP1-053\]](#) and updated throughout the Examination (with [\[AS-015\]](#) being the final PADSS and [\[AS-016\]](#) being the final Risk and Issues Log).

1.4.9. The signed SoCGs and Natural England PADSS and Risk and Issues Log have been taken fully into account by the ExA in all relevant sections of this Report. The weight (if any) to be afforded to unsigned SoCGs in specific contexts is considered in the relevant sections of this Report.

### **Written questions**

1.4.10. The ExA asked two rounds of written questions during the Examination:

- ExQ1 on 29 October 2024 [\[PD-004\]](#)
- ExQ2 on 19 December 2024 [\[PD-009\]](#)

1.4.11. The ExA also issued a request for further information and comments under Rule 17 of the Infrastructure Planning (Examination Procedure) Rules 2010 on 3 March 2025 [\[PD-012\]](#).

### **Site inspections**

1.4.12. The ExA carried out the following unaccompanied site Inspections:

- On 11 and 12 September 2024 to the Lancashire coast and the IoM, via ferry from Heysham to Douglas and returning from Douglas to the Port of Liverpool [\[EV3-001\]](#).
- On 6 November 2024 to the Cumbrian coast and the Lake District [\[EV3-002\]](#).

1.4.13. No accompanied site inspections were requested or carried out.

### **Hearings**

1.4.14. Three sets of issue specific hearings (ISH) were held under s91 PA2008, which were live streamed and recorded:

- ISH1 on 10 September 2024 [\[EV2-001\]](#) and [\[EV2-003\]](#)
- ISH2 on 26 and 27 November 2024 [\[EV4-001\]](#), [\[EV4-002\]](#), [\[EV4-004\]](#), [\[EV4-006\]](#), [\[EV4-008\]](#), [\[EV5-010\]](#), [\[EV5-012\]](#) and [\[EV5-014\]](#)
- ISH3 on 12 February 2025 [\[EV6-002\]](#), [\[EV6-003\]](#), [\[EV6-005\]](#), [\[EV6-007\]](#), [\[EV6-009\]](#) and [\[EV6-011\]](#)

## **1.5. OTHER CONSENTS**

- 1.5.1. In addition to the consents required under the PA2008, the Applicant will require other consents to construct, operate and maintain the Proposed Development. The Applicant sets these out in Table 1.2 [\[APP-064\]](#). The ExA has considered the available relevant information and, without prejudice to the exercise of discretion by future decision-makers, has concluded that there are no apparent impediments to the implementation of the Proposed Development, should the SoS grant the application.

## **1.6. OUTSTANDING MATTERS AT THE CLOSE OF THE EXAMINATION**

- 1.6.1. For a number of reasons, there were a number of matters which were either not resolved at the end of the Examination or where, at the discretion of the SoS, updated information may be helpful. These are primarily related to aviation and radar and shipping and navigation and are discussed further in the relevant sections in Chapter 3 of this Report.

## **1.7. STRUCTURE OF THIS REPORT**

- 1.7.1. The structure of the remainder of this Report is as follows:

- [Chapter 2](#) identifies how the application is to be determined and summarises the key legislation and policy context that applies to the decision.
- [Chapter 3](#) sets out the findings and conclusions in relation to the individual planning issues that arose from the Application and during the Examination.
- [Chapter 4](#) provides a summary of conclusions in relation to Habitats Regulations Assessment
- [Chapter 5](#) sets out the balance of planning considerations arising from Chapter 3 in the light of important and relevant factual, legal and policy considerations.
- [Chapter 6](#) considers the implications of the matters arising from the preceding chapters for the Development Consent Order (DCO).
- [Chapter 7](#) summarises all relevant considerations and sets out the ExA's recommendation to the SoS.

- 1.7.2. This Report is supported by the following appendices:

- [Appendix A](#) – Reference Tables
- [Appendix B](#) – List of Abbreviations
- [Appendix C](#) – Habitats Regulations Assessment
- [Appendix D](#) – The Recommended DCO



## **2. HOW THE APPLICATION IS DETERMINED**

### **2.1. INTRODUCTION**

- 2.1.1. This Chapter identifies the key legislation, policy and Local Impact Report (LIR) that the Examining Authority's (ExA) recommendations are made against. Additional detail is provided in [Appendix A](#) to this Report.

### **2.2. LEGISLATION AND POLICY**

#### **Planning Act 2008**

- 2.2.1. The Planning Act 2008 (PA2008) provides a different basis for decision-making for Nationally Significant Infrastructure Project (NSIP) applications where a relevant National Policy Statement (NPS) (s104) has effect from that where no NPS has effect (s105). This is an application in respect of which there is more than one NPS in effect and so the provisions of s104 apply in this case. There are no substantial elements of the Proposed Development that fall outside the remit of relevant NPS policies and so PA2008 s105 (decisions in cases where no NPSs have effect) is not relevant.
- 2.2.2. Section 104(2) of the PA2008 sets out the matters to which the SoS must have regard when making its decision. These include any relevant NPS, any duly submitted LIR, any matters prescribed in relation to the development, and any other matters the SoS thinks are both important and relevant to the decision.
- 2.2.3. Section 104(3) of the PA2008 requires the SoS to decide the Application in accordance with any relevant NPS that has effect in relation to this application, subject to the exceptions in s104(4) to (8) as follows:
- Where deciding the application in accordance with any relevant NPS would lead to the UK being in breach of any of its international obligations
  - Where deciding the application in accordance with any relevant NPS would lead to the SoS being in breach of any duty imposed on her or him by or under any enactment
  - Where deciding the application in accordance with any relevant NPS would be unlawful by virtue of any enactment
  - Where the adverse impact of the Proposed Development would outweigh its benefits, and /or
  - Where any condition prescribed for deciding an application otherwise than in accordance with a NPS is met
- 2.2.4. This Report sets out the ExA's findings, conclusions and recommendations taking these matters into account and applying s104 of the PA2008.

#### **Other Legislation**

- 2.2.5. A full list of relevant primary and secondary legislation, including but not limited to duties arising under the Equality Act 2010, Human Rights Act 1998, the Climate Change Act 2008 (as amended), the Marine and Coastal Access Act 2009 and the Conservation of Habitats and Species Regulations 2017 (as amended), can be found in [Appendix A](#) of this Report. All applicable legislation has been considered by the ExA as required and the findings and recommendations in this Report are framed so as to identify and enable the SoS to discharge all applicable statutory considerations or duties.

## 2.3. NATIONAL POLICY STATEMENTS

2.3.1. NPSs set out UK government policy on different types of national infrastructure development. Having regard to the purposes of s104(2)(a) of the PA2008, NPS EN-1 (Overarching NPS for Energy), and NPS EN-3 (for Renewable Energy Infrastructure) are relevant to the Application.

2.3.2. The NPSs form the primary policy context for this Examination and decision making. This Report sets out the ExA's findings, conclusions and recommendations taking these matters into account and applying the approach set out in s104 of the PA2008. The purpose and broad content of these NPSs is summarised here. [Appendix A](#) provides further detail on the NPS of relevance to the Proposed Development.

### **Overarching National Policy Statement for Energy (NPS EN-1)**

2.3.3. NPS EN-1 was published in November 2023 and designated in January 2024. It sets out general principles and generic impacts to be taken into account in considering applications for energy NSIPs. All other energy NPS (including NPS EN-3) sit within the policy framework provided by this NPS. It provides the primary basis for determining if development consent should be granted for energy development.

2.3.4. Specifically, Part 3 of NPS EN-1 explains the urgent need for significant amounts of large-scale energy infrastructure in meeting government's energy objectives. Part 4 sets out the general policies for the submission and assessment of energy infrastructure applications. Part 5 outlines generic impacts which arise from the development of all types of energy infrastructure covered by the energy NPSs.

2.3.5. NPS EN-1 also sets out the critical national priority (CNP) for the provision of nationally significant low carbon infrastructure (paragraphs 4.24 and 4.2.5). NPS EN-1 also states that the urgent need for CNP infrastructure to achieving the UK's energy objectives, together with the national security, economic, commercial, and net zero benefits, will in general outweigh any other residual impacts not capable of being addressed by application of the mitigation hierarchy.

### **National Policy Statement for Renewable Energy Infrastructure (NPS EN-3)**

2.3.6. NPS EN-3 was published in November 2023 and designated in January 2024. Together with NPS EN-1 it provides the primary policy for decisions by the SoS on applications for nationally significant renewable energy infrastructure, including offshore wind. Section 2.8 of NPS EN-3 is specifically dedicated to the assessment and consideration of applications for offshore wind. It covers matters such as factors influencing site selection and design, technical considerations, and impacts (including to biodiversity and ecological conservation, commercial fisheries and fishing, marine historic environment, navigation and shipping, seascape and visual effects and other offshore infrastructure and activities).

### **Revised Energy National Policy Statements**

2.3.7. Following the closure of the Examination and during the course of reporting (on 24 April 2025), the government published revisions to NPS EN-1 and NPS EN-3 for consultation. However, the [consultation material](#) makes clear that for any application accepted for examination before amending the energy NPSs, the current suite of energy NPS, designated in 2024, should have effect.

2.3.8. It therefore follows that the ExA has assessed the Proposed Development entirely within the framework provided by NPS EN-1 and NPS EN-3 published in November 2023 and designated in January 2024.

2.3.9. The ExA also considers that the National Policy Statement for Ports is important and relevant to this application although it will not be determined under that NPS.

## **2.4. OTHER RELEVANT NATIONAL POLICIES**

2.4.1. Other relevant government policy and associated guidance has been taken into account by the ExA. [Appendix A](#) provides a full list of the relevant national policy, statements and guidance to the Proposed Development. These policies are also discussed in more detail in [Chapter 3](#) within 'The Principle of Development' section.

2.4.2. The UK Marine Policy Statement (MPS) sets out the framework for preparing Marine Plans and taking decisions affecting the marine environment. The policy objectives for the key activities that take place in the marine environment are set out in chapter 3 of the MPS. These objectives inform the North West Inshore and North West Offshore Marine Plan, which aims to deliver the high-level marine objectives set out in the MPS. NPS EN-1 paragraphs 4.5.8 and 4.5.9 state that applicants must take account of any relevant marine plans in planning their development and the SoS must have regard to any appropriate marine policy documents when making a decision on an application. However, in the event of a conflict between a NPS and any marine planning documents, that NPS prevails for purposes of decision making (NPS EN-1, paragraph 4.5.12).

## **2.5. LOCAL IMPACT REPORTS**

2.5.1. Given that the Proposed Development is wholly offshore there are no local authorities falling under the definition in s56A of the PA2008. However, in its Rule 6 letter [\[PD-001\]](#) the ExA stated that it welcomed LIRs from any local authorities who wished to submit one, and specifically requested a LIR from the Isle of Man Government ('IoM government') who submitted via its Territorial Sea Committee (IoM TSC) its LIR into the Examination at Deadline 1 [\[REP1-047\]](#). The content of that LIR from the IoM TSC has been considered through the Examination and in this Report. The issues raised are considered in further detail in relation to relevant planning issues in [Chapter 3](#) of this Report.

## **2.6. ENVIRONMENTAL IMPACT ASSESSMENT**

2.6.1. The Applicant provided a notification under Regulation 8(1)(b) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations) of its intention to provide an Environmental Statement (ES). Therefore, in accordance with Regulation 6(2)(a) of the EIA Regulations, the ExA determined that the Proposed Development was EIA development.

2.6.2. On 14 June 2024 the Applicant submitted a [Scoping Report](#) to the SoS under Regulation 10 of the EIA Regulations in order to request an opinion about the scope of the ES to be prepared. On 22 July 2024 the Planning Inspectorate provided a [Scoping Opinion](#).

2.6.3. Overall, the ExA considers that the ES, as supplemented with additional information during the Examination, is sufficient to enable the SoS to take a decision in compliance with the EIA Regulations.

- 2.6.4. The ExA considered that changes to the documentation, comprising the ES during the Examination, did not individually or cumulatively undermine the scope and assessment of the ES. [Chapter 3](#) of this Report will summarise the environmental effects under each topic section.

## **2.7. HABITATS REGULATIONS ASSESSMENT**

- 2.7.1. The SoS is the competent authority for the purposes of the Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats Regulations). The Habitats Regulations were amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
- 2.7.2. The Proposed Development is one that has been identified as giving rise to the potential for likely significant effects (LSE) on European sites and hence is subject to a Habitats Regulations Assessment (HRA). As is the convention and to inform SoS decisions prepared under the PA2008, a separate record of considerations relevant to HRA has been set out in [Appendix C](#) of this Report, a summary of which can be found in [Chapter 4](#).

## **2.8. TRANSBOUNDARY EFFECTS**

- 2.8.1. A transboundary screening under Regulation 32 of the EIA Regulations was undertaken by the Inspectorate on behalf of the SoS on 10 October 2022 [\[OD-007\]](#), following the Applicant's request for an EIA Scoping Opinion. The Inspectorate identified potential LSE on the environment in two European Economic Area (EEA) States, the Republic of Ireland and Belgium. A notice was placed in the London Gazette on 17 October 2022. Belgium and the Republic of Ireland were notified of the proposed development and the Republic of Ireland requested to be involved in the transboundary consultation procedure. Belgium did not respond.
- 2.8.2. Following submission of the Application, a second screening was undertaken by the Inspectorate on behalf of the SoS on 3 July 2024 [\[OD-007\]](#). The second screening concluded that the Inspectorate remained of the view that the proposed development was likely to have a significant effect on the environment in the Republic of Ireland, due to potential impacts on shipping and navigation. It concluded that the Planning Inspectorate was now of the view that the proposed development was not likely to have a significant effect on the environment in Belgium. No new EEA States were identified as likely to be affected.
- 2.8.3. No further action was required in respect of Belgium. The Republic of Ireland was consulted under Regulation 32, with responses received in [\[OD-004\]](#) and [\[OD-005\]](#). Meath County Council (as coastal planning authority) provided a response [\[OD-006\]](#). The ExA invited the Republic of Ireland to the PM as an Other Person [\[PD-001\]](#) so that it could participate in the Examination but it did not participate any further. A further response was received in [\[REP5-100\]](#) from Meath County Council, which welcomed the Applicants response to its submission and confirmed it had no further comments to make.
- 2.8.4. Potential transboundary impacts were considered by the Applicant in the Transboundary Impacts Screening [\[APP-032\]](#) and transboundary assessments within relevant chapters of the ES.
- 2.8.5. The Regulation 32 duty is an ongoing duty, and on that basis, the ExA has considered whether any facts have emerged to change these screening conclusions, up to the point of closure of the Examination. The ExA is satisfied, on

the basis of the information provided to the Examination, that there is no change to the screening conclusions and that for the purposes of environmental impact assessment the IoM government agrees to be treated as if it were a part of the UK.

- 2.8.6. In respect of the Isle of Man, the Applicant's transboundary impacts screening report clarifies that:

*...the Isle of Man is a Crown Dependency of the UK and not a European Economic Area State. Therefore, Regulation 32 of the EIA Regulations does not apply to the Isle of Man. For this reason, it is not considered to be a transboundary consultee for the Morgan Generation Assets. As such, potential impacts upon environmental receptors within the Isle of Man are not considered to be transboundary. Potential impacts upon environmental receptors within the Isle of Man are fully considered in the Environmental Statement (paragraph 1.1.1.5 [\[APP-032\]](#))*

- 2.8.7. This Report considers transboundary matters in the relevant topic sections of Chapter 3 where relevant.

### 3. THE PLANNING ISSUES

#### INTRODUCTION

- 3.1.1. This Chapter sets out the Examining Authority's (ExA) findings and conclusions on the planning issues. The Chapter is structured to examine overarching issues first, followed by sections covering individual environmental impact topics.
- 3.1.2. In each section the ExA introduces the topic, followed by a summary of the Application as made, then reports on the main issues arising in the Examination of each topic followed by ExA considerations on each issue. Finally, the ExA provides conclusions for each topic and whether the effects carry any or little weight, moderate weight, great weight, or very great weight for or against the making of the Development Consent Order (DCO).

#### INITIAL ASSESSMENT OF PRINCIPAL ISSUES

- 3.1.3. As required by section (s) 88 of the Planning Act 2008 (PA2008) and Rule 5 of the Infrastructure Planning (Examination Procedure) Rules 2010, the ExA made an initial assessment of principal issues (IAP) arising from the Application in advance of the Preliminary Meeting (PM). This was based on the Application documents and submitted relevant representations (RR). The list of issues relates to all phases of the proposed development. The IAP was raised at the PM and no other key topics were identified during the Examination. The IAP can be found in Annex C of the Rule 6 letter [\[PD-001\]](#) listed as:

- Aviation and radar
- Biodiversity and ecology (including ornithology)
- Commercial fisheries
- Habitats Regulations Assessment
- Other offshore infrastructure and other sea users
- Shipping and navigation

#### THE PLANNING ISSUES IN THIS REPORT

- 3.1.4. The ExA considers that the issues raised by interested parties (IPs) both in RRs and during the Examination were broadly in line with the IAP. It should also be noted that the IAP is a high-level framework. The ExA has nonetheless had regard to all important relevant matters arising from submissions from IPs and has reported on these, where necessary, within each section below.
- 3.1.5. There are other issues not listed in the IAP but which were subject to written and oral questioning during the Examination. These include the historic environment (marine and terrestrial), human health, seascape and landscape visual impact assessment (SLVIA), and social and economic effects.
- 3.1.6. Considerations of need, climate change, policy and legislation, cumulative effects, inter-related effects and the draft Development Consent Order (DCO) including Deemed Marine Licences (DML) are also included within this Report.
- 3.1.7. The Crown Estate confirmed that there is no 'land' forming part of the Crown Estate which is subject to the proposed DCO and that the seabed included in the order limits of the draft DCO is not 'land' for the purpose of s235 of the PA2008. Therefore, there is no need for a book of reference including Crown land or any provisions in the draft DCO authorising the acquisition of third-party interests in Crown land. Instead, the necessary rights and interests that the Applicant requires



for the undertaking of the Proposed Developments is dealt with in the Agreement for Lease granted by the Crown Estate Commissioners. The draft DCO nevertheless contain “Crown rights” wording at Article 10 and the Commissioners confirmed satisfaction with this wording [\[REP5-089\]](#).

- 3.1.8. Given the wholly offshore nature of the proposed development there is no other consideration of land rights and compulsory acquisition matters. Nonetheless, the ExA has conducted all aspects of the Examination with the Human Rights Act 1998 and the Equalities Act 2010 (including the Public Sector Equality Duty) in mind. The ExA’s first written questions (ExQ1) GEN 1.17 [\[PD-004\]](#) asked the Applicant to confirm how the Human Rights Act 1998 and the Equality Act 2010 has been considered in the application process. The Applicant’s response covers these issues satisfactorily [\[REP3-006\]](#).
- 3.1.9. The overarching issues are considered in sections 3.2 to 3.4 of this Chapter, including the principle of the development, climate change and need, site selection and alternatives, and consideration of interaction with other Irish Sea projects and the grid connection proposals which are the subject of separate DCO applications. The ExA concludes on the overarching issues collectively, at the end of section 3.4.
- 3.1.10. The planning issues are then considered as follows:
- Section 3.5: Aviation and radar
  - Section 3.6: Commercial fisheries
  - Section 3.7: Fish and shellfish ecology
  - Section 3.8: Marine Mammals
  - Section 3.9: Ornithology
  - Section 3.10: Physical processes and benthic ecology
  - Section 3.11: Shipping and navigation
  - Section 3.12: Other offshore infrastructure and sea users
  - Section 3.13: Other considerations

## **3.2. THE PRINCIPLE OF THE DEVELOPMENT**

### **INTRODUCTION**

- 3.2.1. In addition to the issues arising from the IAPI, the ExA has also given consideration on an overarching basis to the principle of the development in terms of:
- Need
  - Conformity with National Policy Statements (NPS) and other policy and legislation
  - Climate change and greenhouse gas effects
- 3.2.2. The overarching NPS for energy EN-1 sets out general principles and generic impacts to be taken into account in considering applications for energy Nationally Significant Infrastructure Projects (NSIPs). All other energy NPS sit within the policy framework provided by NPS-EN1, including NPS EN-3 which provides the primary policy for decisions by the Secretary of State (SoS) on applications for nationally significant renewable energy infrastructure, including offshore wind, for which detailed policy guidance is set out in section 2.8 of the document.
- 3.2.3. Section 2 of NPS EN-1 refers to the government’s strategy to transform the energy system to meet 2050 net zero commitments, tackling emissions while continuing to ensure secure and reliable energy supply, reducing dependence on imported oil and

gas, and ensuring affordable bills for households and businesses. Meeting these objectives necessitates a significant amount of new energy infrastructure from renewable sources.

- 3.2.4. Section 3 of NPS EN-1 establishes the need for new NSIPs, with paragraphs 3.2.6 to 3.2.8 setting out that the applications should be assessed on the basis that the government has demonstrated that there is an urgent need for them, and that substantial weight should be given to this need. The SoS is not required to consider separately the specific contribution of any individual project to satisfying the need established in NPS EN-1.
- 3.2.5. Paragraphs 3.3.20 to 3.3.24 specifically refer to the role of wind and solar as the lowest cost ways of generating electricity, helping to reduce costs and provide a clean and secure source of electricity supply.
- 3.2.6. Climate change adaptation and resilience is contained within section 4.10 of NPS EN-1 and greenhouse gas (GHG) emissions in section 5.3. Paragraphs 5.3.8-5.3.10 note that the SoS:
- Must be satisfied that the applicant has as far as possible assessed the GHG emissions of all stages of the development
  - Should be content that the applicant has taken all reasonable steps to reduce the GHG emissions of the construction and decommissioning stage of the development
  - Must accept that there are likely to be some residual emissions from construction and decommissioning of energy infrastructure.
- 3.2.7. NPS EN-1 paragraph 5.3.12 confirms that the SoS does not need to assess individual applications for planning consent against operational carbon emissions and their contribution to carbon budgets, net zero and our international climate commitments.
- 3.2.8. Paragraphs 3.3.62 and 3.3.63 of NPS EN-1 set out the critical national priority (CNP) for the provision of nationally significant low carbon infrastructure. Subject to any legal requirements, the urgent need for CNP infrastructure to achieving energy objectives, together with the national security, economic, commercial, and net zero benefits, will in general outweigh any other residual impacts not capable of being addressed by application of the mitigation hierarchy. The government strongly supports the delivery of CNP infrastructure, noting that it should be progressed as quickly as possible.
- 3.2.9. Section 4.2 of NPS EN-1 further sets out the CNP for low carbon infrastructure, noting that the overarching need case for each type of energy infrastructure and the substantial weight which should be given to this need in assessing applications is the starting point for all assessments. The policy applies following the normal consideration of the need case, the impacts of the project, and the application of the mitigation hierarchy. This and any identified residual impacts are considered in the remainder of this Chapter.
- 3.2.10. The CNP presumptions are set out in paragraphs 4.2.15 to 4.2.22, noting that residual impacts are unlikely to outweigh the urgent need for the energy infrastructure in all but the most exceptional circumstances. Exceptions to this presumption of consent are those residual impacts which present an unacceptable risk to or interference with human health and public safety, defence, irreplaceable



habitats or unacceptable risk to the achievement of net zero. The same exception applies to unacceptable risk or interference to navigation offshore.

## THE APPLICATION

- 3.2.11. The Applicant's case for the need for the proposed development is set out within the Environmental Statement (ES) Volume 2, Chapter 2: Policy and legislative context [\[APP-009\]](#) and the Planning Statement [\[APP-074\]](#). The Applicant's assessment of climate change and GHG effects is primarily contained in ES Volume 2, Chapter 12: Climate change [\[APP-016\]](#). It is supported by Volume 3, Annex 3.2: Sulphur hexafluoride report [\[APP-029\]](#); Volume 4, Annex 12.1: Technical greenhouse gas assessment [\[APP-046\]](#); and Volume 4, Annex 12.2: Climate change risk assessment [\[APP-047\]](#). Effects on emissions are also referred to within ES Volume 2, Chapter 7: Shipping and navigation [\[APP-025\]](#), in relation to additional fuel usage and emissions resulting from re-routing of ferries. This is covered in more detail in section 3.11 of this report.
- 3.2.12. Section 2.4 of the Planning Statement [\[APP-074\]](#) sets out the presumptions in favour of CNP infrastructure and at paragraph 2.4.2.12 the Applicant considers that none of the exceptions to the presumption of consent as set out in NPS EN-1 paragraph 4.1.7 apply to the proposed development. It explains that the project has evolved to ensure that the mitigation hierarchy has been followed in relation to potential effects identified throughout the application preparation process such that there would be no residual effects that should affect to outweigh the strong presumption in favour of granting consent.
- 3.2.13. Table A.2 of the Planning Statement summarises how the Applicant considers the application accords with the relevant paragraphs of NPS EN-1 in terms of the principle of development and need.
- 3.2.14. Project benefits of the Proposed Development are set out in section 2.22.2 of [\[APP-074\]](#). In relation to meeting the urgent need for energy generation it sets out that the proposed development would generate over 1.5 gigawatts (GW) of renewable energy by 2030, and that resultant reductions in carbon dioxide emissions would contribute to meeting targets in line with the Climate Change Act 2008 (2050 Target Amendment) Order 2019.
- 3.2.15. The Applicant's assessment in ES Chapter 12 [\[APP-016\]](#) confirms that that the renewable electricity generation from the Proposed Development and the consequent displacement of electricity generation from fossil fuels which would produce a positive GHG impact and a significant beneficial effect in the order of approximately 2,300,000 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) savings by 2064, and would result in 324,370 tCO<sub>2</sub>e avoided emissions over the lifetime of the Proposed Development. This is after taking account of any GHG emissions generated by its construction, operation and maintenance and decommissioning. The Applicant concludes this would provide a substantial contribution towards national energy and climate change policy targets. In contextual terms, the proposed development would generate enough renewable energy in year one to power over 1.3 million households across England [\[APP-016\]](#), paragraphs 12.16.1.4 to 12.16.1.10].
- 3.2.16. The Applicant also cites in its outline skills and employment plan socio-economic benefits that would accrue from the Proposed Development's support for the transition to low carbon economies with employment generation (depending on port location for construction and operations and maintenances phases) as set out in the

outline skills and employment plan. This estimates that the activities could support up to 9,380 jobs and £675 million gross value added (GVA) [APP-078].

- 3.2.17. The biodiversity benefit statement [APP-073] notes that Schedule 15 of the Environment Act 2021 sets out at least a 10% objective for biodiversity net gain but this is not yet in force for NSIPs. The Applicant refers to the Marine Net Gain consultation (DEFRA, 2022) which set out considerations for a contributions-based approach to fund priority environmental enhancement or restoration projects managed through the Marine Recovery Fund (MRF) within the Offshore Wind Environmental Improvement Package (OWEIP) of the British Energy Security Strategy. The statement notes the delay to implementation of the MRF but includes a commitment to engaging with stakeholders on its progress and identification of mitigation measures and potential marine biodiversity enhancement options.
- 3.2.18. Other international and national legislation is listed in [Appendix A](#) of this Report. These include the Climate Change Act 2008 as the basis for reduction of GHG, with a commitment for the UK government to reduce GHG emissions by at least 100% of 1990 levels (net zero) by 2050. Powering our Net Zero Future (2021) and the Net Zero Strategy: Build Back Greener (2021) set out the government's targets for 40GW of offshore wind by 2030. This aligns with the Prime Minister's Ten Point Plan for a Green Industrial Revolution (2020). The Applicant stresses that the proposed development would contribute towards the British Energy Security Strategy (2022) revised target of 50 GW of offshore wind by 2030. The proposed development is expected to generate over 1.5 GW of renewable energy by 2030.
- 3.2.19. The National Planning Policy Framework (NPPF), the UK Marine Policy Statement (MPS) 2011, and the North West Inshore and North West Offshore Marine Plan 2011 (NWMP) are also summarised by the Applicant within the Planning Statement [APP-074].
- 3.2.20. Table 12.12 of ES Volume 2, Chapter 12: Climate change [APP-016] affirms that industry best practice measures would be adopted within the proposed development's design and operational management to ensure resilience of the Project to the effects of climate change, including:
- Scour protection to offshore structures
  - Wind turbine generators to be fitted with automatic shutdowns/lockdowns.
  - Substation design to account for extreme temperature conditions
  - Appropriate material design and protection and regular inspections to be carried out to assess wind turbine and substation condition
- 3.2.21. Paragraph 12.10.2.5 of ES Chapter 12 [APP-016] concludes risks to the proposed development due to climate change would be negligible and not significant. This is shown in more detail in ES Volume 4, Annex 12.2: Climate change risk assessment [APP-047], which summarises the potential climate change impacts in a risk assessment format.

## **ISSUES CONSIDERED DURING THE EXAMINATION**

- 3.2.22. No interested party (IP) questioned the principle of or need for the Proposed Development, and this was not examined any further. The Examination focused on the assessment of existing and emerging policy and guidance, and a number of new government papers were published during the Examination. The effects on climate change and net GHG emissions were questioned by the ExA and raised by a number of IPs. These specific issues are considered in detail in section 3.11 of this

Report in consideration of shipping and navigation, and in section 3.12 in relation to other offshore infrastructure.

3.2.23. The following overarching issues were considered:

- New and emerging government guidance and policy papers
- Net greenhouse gas effects
- Application of the mitigation hierarchy and CNP

#### **Government guidance and policy**

3.2.24. A range of new and updated publications were issued by the UK government in December 2024.

3.2.25. The Applicant's response to the ExA's second written questions (ExQ2) GEN 2.3 [\[REP5-015\]](#) confirmed that the updated NPPF published on 12 December 2024 did not have implications. The Applicant also provided comments on the Clean Power 2030 Action Plan published on 13 December 2024 which reinforces the UK government ambitions to achieve clean power targets including 43-50 GW of installed offshore wind capacity by 2030. The Applicant stated that the targets would be supported by the material contributions to be made by the Proposed Development. The Applicant did not consider there to be implications for the ES as submitted. It is noted that the action plan includes proposals for updates to the NPS as well as further guidance being produced.

3.2.26. In January 2025 several marine policy papers were issued, including:

- [Reducing Marine Noise Policy](#)
- [The Marine environment: unexploded ordnance clearance Joint Position Statement](#), and the associated [JNCC guidelines for minimising the risk of injury to marine mammals from UXO clearance in the marine environment](#)
- [The Joint Position Statement on the use of quieter piling methods and noise abatement systems when installing offshore wind turbine foundations](#)

3.2.27. The ExA sought comments from the Applicant in ISH3 [\[EV6-002\]](#), followed up by action point 10 [\[EV6-011\]](#). The Applicant's response (Annex 4.1, [\[REP6-011\]](#)) set out the key provisions of each document, together with how and where they were considered in the Application. Updates were made to documents relating to underwater sound as a consequence (sections 3.7 and 3.8 of this Report).

3.2.28. Furthermore, [Strategic compensation measures for offshore wind activities: Marine Recovery Fund interim guidance](#) was published by the UK government on 29 January 2025. The ExA did not seek comments on this, given that the OWEIP continues to be in the process of being implemented through secondary legislation and guidance.

#### **Net greenhouse gas effects**

3.2.29. The effects on climate change and net GHG emissions were questioned by the ExA and a number of IPs, and the specific issues are considered in detail in section 3.11 of this Report in consideration of shipping and navigation, and in section 3.12 of wake effects on the energy output of other existing offshore wind farms.

3.2.30. In its second written questions (ExQ2), [\[PD-009\]](#), GEN 2.12] the ExA asked the Applicant to provide comment on whether the recent court cases of *R. (on the application of Finch on behalf of the Weald Action Group) v Surrey County Council (2024) UKSC 20* (the Finch case), and *Friends of the Earth Ltd and South Lakeland*

*Action on Climate Change v SSLUHC (2024) EWHC 2349 (the FoE/ South Lakeland case) have any implications for the assessments of GHG emissions. The Applicant responded, with extensive justification, that it did not consider that either case has any implications for its assessment of carbon emissions, concluding that:*

*It is not possible to undertake an assessment of upstream or downstream emissions beyond that set out in APP-016, as it would not be possible to make a causal link between the generation of energy through the development and any increase or decrease of carbon emissions as a result of downstream use. There are innumerable ways, industries and processes in which the electricity produced by the development could be used. The impact-receptor-effect pathway is simply too intangible for there to be any identification or assessment of the likely significant effects downstream. As set out in the Finch case, where it is impossible to ascertain that downstream use there is no need to consider this further within an EIA*  
[\[REP5-015\]](#)

- 3.2.31. The Applicant provided a calculation of net effects on GHG emissions in relation to potential energy generation loss incurred by downwind existing wind turbines under wake effects [\[REP5-041\]](#). This was updated [\[REP6-063\]](#) in response to submissions from the Ørsted IPs, and this is covered in more detail in section 3.12 of this Report. In summary, the Applicant argued that even if there were to be potential effects from the proposed development on the Ørsted IPs energy production then the net avoided GHG emissions of the proposed development in combination with the relevant existing operational wind farms show an overwhelmingly positive benefit [\[REP6-014\]](#).

#### **Application of the mitigation hierarchy and CNP**

- 3.2.32. The Applicant was asked by ExQ1 GEN 1.16 [\[PD-004\]](#) to provide a clear statement of the consideration of section 4.2 of NPS EN-1. In response [\[REP3-006\]](#) it clarified that the policies on CNP are the starting point for SoS decision making. Amongst other things, it agreed CNP does not create an additional need case and that it applies after consideration of the impacts of the project and the mitigation hierarchy. The Applicant also set out its conclusions that none of the residual impacts of the proposed development would fall within the scope of the exceptions listed in paragraph 4.2.15 of NPS EN-1, and that all residual impacts have been avoided or mitigated to an acceptable level.

### **3.3. SITE SELECTION AND ALTERNATIVES**

#### **INTRODUCTION**

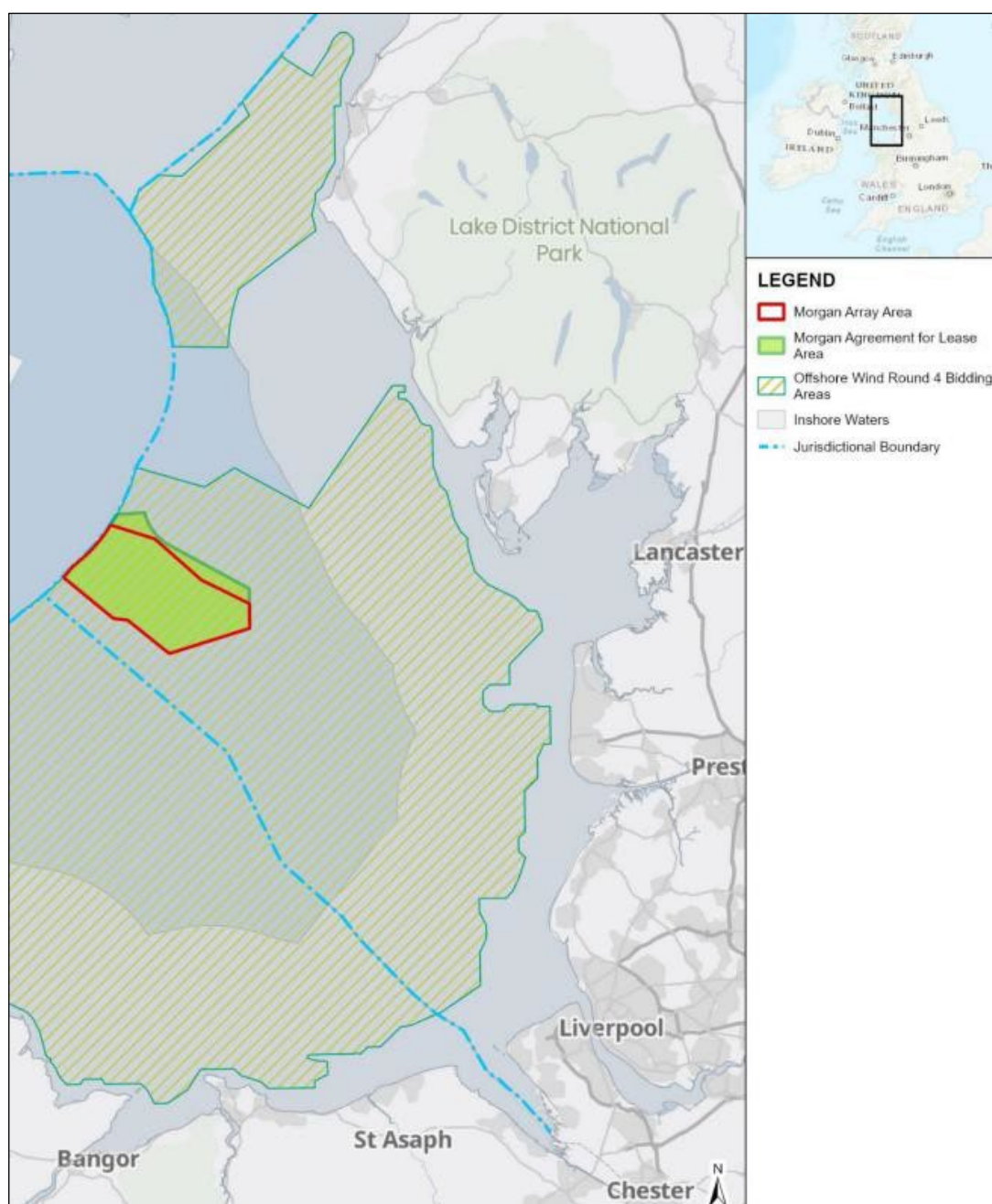
- 3.3.1. This section considers the Applicant's approach to site selection and alternatives in respect of how the project evolved at pre-application stage, and the final extent of the array area of the Application as submitted.
- 3.3.2. The topic is considered in the context of NPS EN-1 paragraph 4.3.22. This sets out that given the level and urgency of need for new energy infrastructure the SoS should, subject to any relevant legal requirements which indicate otherwise, be guided by a number of principles when deciding what weight should be given to alternatives. These include the consideration of alternatives in a proportionate manner in meeting the objectives of the proposed development.

#### **THE APPLICATION**

- 3.3.3. The Applicant's consideration of site selection and alternatives is set out in ES Volume 1, Chapter 4 [\[APP-011\]](#). It describes how the array area has evolved, outlining the approach taken to design the spatial boundaries (order limits), explains its siting decisions and the steps undertaken to refine the Proposed Development prior to submission of the application.
- 3.3.4. The Crown Estate leasing round 4 and identification of the agreement for lease (AfL) area is explained at section 4.1.4 of [\[APP-011\]](#), and the criteria set by the Crown Estate are set out in table 4.1. This includes avoidance of a number of hard constraints, and the specification that projects may not be located within 7.5km of an existing offshore wind farm (OWF) which has been awarded an agreement for lease or lease from the Crown Estate unless the owner of the existing offshore wind farm has given its written consent.
- 3.3.5. The constraints analysis exercise undertaken by the Crown Estate and the Applicant is described, with key constraints listed in paragraph 4.1.4.9 relating to physical parameters, grid connection, ecological designations and other environmental considerations. Another requirement of the Crown Estate was that the AfL area should be separated by approximately 500m from the boundary with IoM territorial sea [\[APP-011\]](#)
- 3.3.6. Figure 4.3 of [\[APP-011\]](#), reproduced below at Figure 4, shows the array area as submitted in the Application together with the AfL area and the Crown Estate round 4 bidding area as well as the jurisdictional boundaries for English, Welsh and Isle of Man (IoM) waters.
- 3.3.7. Figure 4.4 from ES Volume 1, Chapter 4 [\[APP-011\]](#), reproduced below at Figure 5 indicates the constraints of offshore wind Round 4 'Bidding Area 4'.

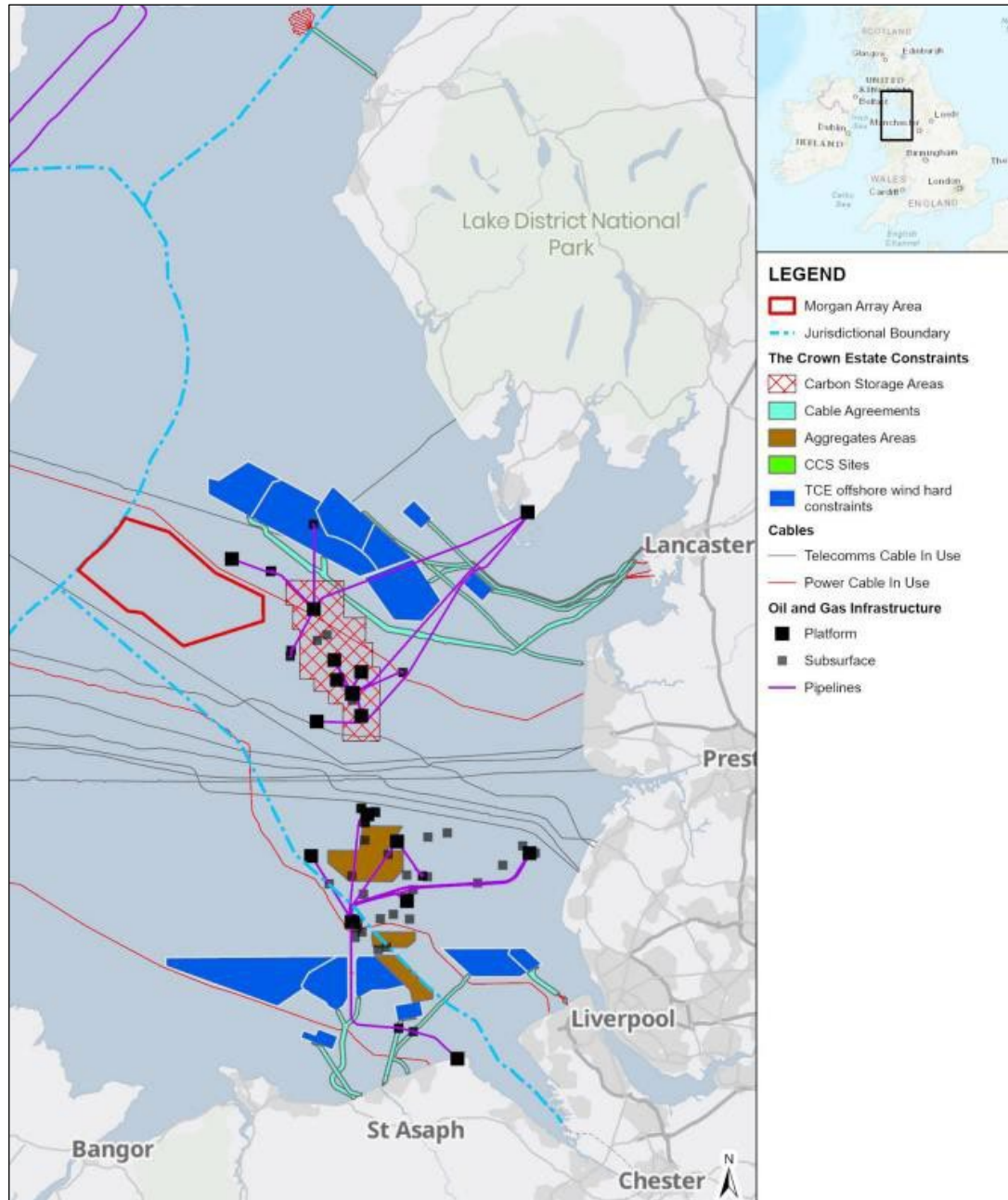


**Figure 4: Morgan Generation Assets Agreement for Lease Area<sup>4</sup>**



<sup>4</sup> Source: ES Volume 1, Chapter 4, Figure 4.3 [APP-011] – do not scale.

**Figure 5: Crown Estate Round 4 Bidding Area 4 Constraints<sup>5</sup>**



3.3.8.

The extent of the Morgan AfL area was limited in various directions:

- Northeast - by the need to maintain 7.5 km from existing OWFs
- South - by the need to maintain 5 km separation from the Mona OWF AfL area, which was awarded prior to the Morgan AfL area
- West - by the extent of the Northern Wales and Irish Sea bidding area and the IoM territorial sea
- East - by the presence of existing oil and gas infrastructure associated with the Millom West, North Morecambe and Dalton fields

<sup>5</sup> Source ES Volume 1, Chapter 4, Figure 4.4 [APP-011] – do not scale.

- East - a 10 km offset from the Liverpool Bay Special Protection Area (SPA) in line with feedback from the Statutory Nature Conservation Bodies (SNCBs)
- Other ecological designations that were avoided are shown in figure 4.6 [APP-011]

3.3.9. Section 4.1.5 of [APP-011] details the split between the generation and transmission assets following the outcome of the Holistic Network Design Review (HNDR). This is explained further in section 3.4 below. Section 4.1.6 explains how the project further evolved following pre-application engagement. A detailed description of the consultation process undertaken is provided in the Consultation Report [APP-088] and Technical Engagement Plan [APP-094]. This was followed by the [Scoping Report](#) submission in June 2022 and Preliminary Environmental Information Report (PEIR) consultation in 2023.

3.3.10. Concerns from key shipping and navigation stakeholders, alongside other feedback on the PEIR and further engineering, environmental and technical work informed the Applicant's decision to reduce the order limits from that presented in the PEIR (from 322km<sup>2</sup> to 280km<sup>2</sup>), to deliver benefits as summarised in Table 4.4 [APP-011], including reducing potential impacts on shipping and navigation stakeholders by:

- Increasing width of sea space between the Proposed Development and the existing Walney OWF and the proposed Mooir Vannin OWF
- Ensuring no overlap with the existing Manx Interconnector subsea cable
- Increasing separation from existing hydrocarbon infrastructure

3.3.11. In addition to the reduction to the order limits the design of the array also changed following PEIR. The total number of wind turbines was amended from a maximum of 107 to 96, with an increase in maximum rotor diameter from 280m to 320m, and maximum blade tip height from 324m to 364m above lowest astronomical tide (LAT). Furthermore, the separation distance between turbines was increased from a minimum spacing of 1000m between each row and 875m between each turbine within a row to a minimum of 1400m both within and between rows.

3.3.12. The Applicant also committed to maintaining two lines of orientation throughout the array area, and wind turbine rows to be orientated roughly north to south. These refinements have been designed to provide additional space for other sea users, facilitating search and rescue, and promoting co-existence and co-location with commercial fisheries stakeholders.

## **ISSUES CONSIDERED DURING THE EXAMINATION**

3.3.13. The consideration of alternatives and the site selection process was not specifically raised as a concern by IPs during the examination. The refinement of the array area following pre-application consultation and the PEIR was highlighted by the Applicant in response to comments from a range of IPs (notably the MMO and Natural England) throughout the Examination on a range of topics, as discussed further in the following sections of this Chapter.

3.3.14. In particular, refinements of the boundary made in response to comments from shipping and navigation IPs regarding ferry routes were highlighted, as well as commercial fishery IPs in respect of a scallop mitigation zone. Due to ground conditions the option of using monopile foundations was also removed.



## **3.4. GRID CONNECTION AND OTHER IRISH SEA PROJECTS**

### **INTRODUCTION**

- 3.4.1. This section sets out the approach taken by the Applicant to separating the wholly offshore OWF generation assets from the Morgan and Morecambe Transmission Assets (the Transmission Assets) project, which comprises a separate application for development consent. It goes on to consider the implications of the split project approach for decision making, as well as introducing the range of other projects in and around the Irish Sea which have been taken account of throughout the Examination.
- 3.4.2. NPS EN-1 provides context for the co-ordinated approach for consenting at paragraphs 3.3.71 and 3.3.77. It stresses that whilst applications may not include the full chain of consents (including connection to the grid), they should include details of how connected infrastructure will be consented, how cumulative impacts will be assessed and whether any other necessary consents have been obtained.
- 3.4.3. Paragraphs 4.11.7 to 4.11.10 of NPS EN-1 note that such co-ordinated applications can bring economic efficiencies and reduced environmental impact. It recognises that on some occasions it may not be possible to co-ordinate applications due to different lead-in times and be subject to different commercial and regulatory frameworks, making it inefficient from a delivery perspective to submit one application. Applicants may therefore decide to submit separate applications for each element, and these should include information on the other elements with confirmation that there are no obvious reasons for why other elements are likely to be refused. The applicant should accept the implicit risks involved in submitting separate applications and must ensure they provide sufficient information to comply with the EIA Regulations including the indirect, secondary, and cumulative effects, which will encompass information on grid connections.
- 3.4.4. Footnote 161 of NPS EN-1 explains that the transition to more co-ordinated transmission is led by two temporal workstreams under the Offshore Transmission Network Review (OTNR), one of which relates to connections to a transmission network forming part of the HNDR under the Pathway to 2030 workstream.
- 3.4.5. Finally, NPS EN-1 paragraph 4.11.13 highlights that where the SoS has decided to grant consent for one project this should not in any way fetter the ability of the SoS to take subsequent decisions on any related projects.

### **THE APPLICATION**

- 3.4.6. Section 4.1.5 of ES Volume 1, Chapter 4: Site selection and consideration of alternatives [\[APP-011\]](#) explains that the proposed development was scoped into the HNDR as a Pathway to 2030 project, the outcome of which concluded that the Morgan Offshore Wind Project Generation Assets and the Morecambe Offshore Windfarm Generation Assets (Morecambe OWF) should work collaboratively to connect to the National Grid at Penwortham in Lancashire.
- 3.4.7. The Applicant sets out that the co-ordinated approach is likely to reduce network infrastructure costs as well as the cumulative environmental impacts and impacts on coastal communities by installing a smaller number of larger connections, each taking power from multiple OWFs instead of individual point-to-point connections for each. A Direction was issued by the SoS under s35 of the Planning Act 2008 set out that the Transmission Assets application should seek development consent for shared export cable corridors to landfall and shared onshore export cable corridors

to onshore substation(s) and onward connection to the National Grid electricity transmission network at Penwortham. The Cumulative Effects Assessment (CEA) includes the Transmission Assets in all scenarios. The CEA is set out within each topic Chapter of the ES.

- 3.4.8. Section 4.2 of [\[APP-011\]](#) sets out the Applicant's consideration of projects in IoM territorial waters, explaining that the site selection process for the Crown Estate's Round 4 bidding area did not take account of any AfL for offshore wind or hydrocarbons within it, but that its bid submission considered the possibility of developments within IoM waters. At the time of the signing of the AfL in January 2023 the IoM Interconnector (Manx Cable Company Limited) and the Norbreck to Port Grenaugh Telecommunication Cable 'Lanis 1' were identified.
- 3.4.9. At the time of completion of the ES submitted with the Application the provisions of the IoM Marine Infrastructure Management Act were not yet in operation. Secondary legislation had not yet been passed to define the application process for the Mooir Vannin Offshore Wind Farm (Mooir Vannin OWF) project which had been identified by the IoM government in 2014 and an AfL signed in November 2015.
- 3.4.10. Paragraph 4.2.2.3 of [\[APP-011\]](#) states the separation distance between the boundaries of the Proposed Development and the Mooir Vannin OWF scoping boundary as approximately 4.85 km at the closest point, and paragraphs 4.2.2.5 and 4.2.2.6 go on to explain that limited engagement with Mooir Vannin OWF Limited took place in relation to shipping and navigation assessment matters prior to submission of the Application. This is detailed in section 3.11 below.
- 3.4.11. ES Volume 1, Chapter 5: EIA methodology [\[APP-012\]](#) includes at section 5.4 an overview of the projects scoped into the CEA, the results of which are presented within each topic chapter of the ES. The methodology explains the tiered approach adopted. The allocation of each project, plan and activity into tiers is not affected by the screening process but is merely a categorisation applied to all projects, plans and activities that have been screened in for assessment.
- Tier 1: Under construction; permitted applications but not yet implemented; and submitted applications not yet determined
  - Tier 2: Projects where a scoping report has been submitted and is in the public domain
  - Tier 3: Projects on the Planning Inspectorate's programme of projects where a scoping report has not yet been submitted and is not in the public domain; or identified in a relevant adopted or emerging development plan or another framework for future development proposals
- 3.4.12. Paragraphs 5.4.3.15 to 5.4.3.20 of [\[APP-012\]](#) explain the position of the other Irish Sea projects within the tiers of the CEA, and sets out uncertainties in undertaking both quantitative and qualitative assessments of each, with potential for refinement of each project. The three-stage approach below sets out how this cumulative assessment for Proposed Development and the Transmission Assets together has been undertaken and presented within the CEA section of each assessment chapter.
- 3.4.13. At the time of submission, the Applicant's sister project Mona OWF had been submitted to the Planning Inspectorate and was in the pre-Examination phase. Neither the Morecambe OWF nor the Transmission Assets applications had been submitted to the Planning Inspectorate but were at an advanced stage of preparation. The CEA includes a three-stage scenario-based approach to

demonstrate how the two elements of the Project (generation and transmission) would be considered and assessed cumulatively when they are being assessed through separate DCO applications. This is summarised by the Applicant in paragraph [\[APP-012\]](#): ES Volume 3, Annex 5.1: Cumulative effects screening matrix [\[APP-031\]](#) sets out the reasoning for screening in and out of a number of other projects within and around the Irish Sea.

## **ISSUES CONSIDERED DURING THE EXAMINATION**

3.4.14. The following issues were considered during the Examination as raised by IPs and/or the ExA:

- Interrelationship with other infrastructure projects
- Moir Vannin
- Stranded assets

### **Interrelationship with other infrastructure projects**

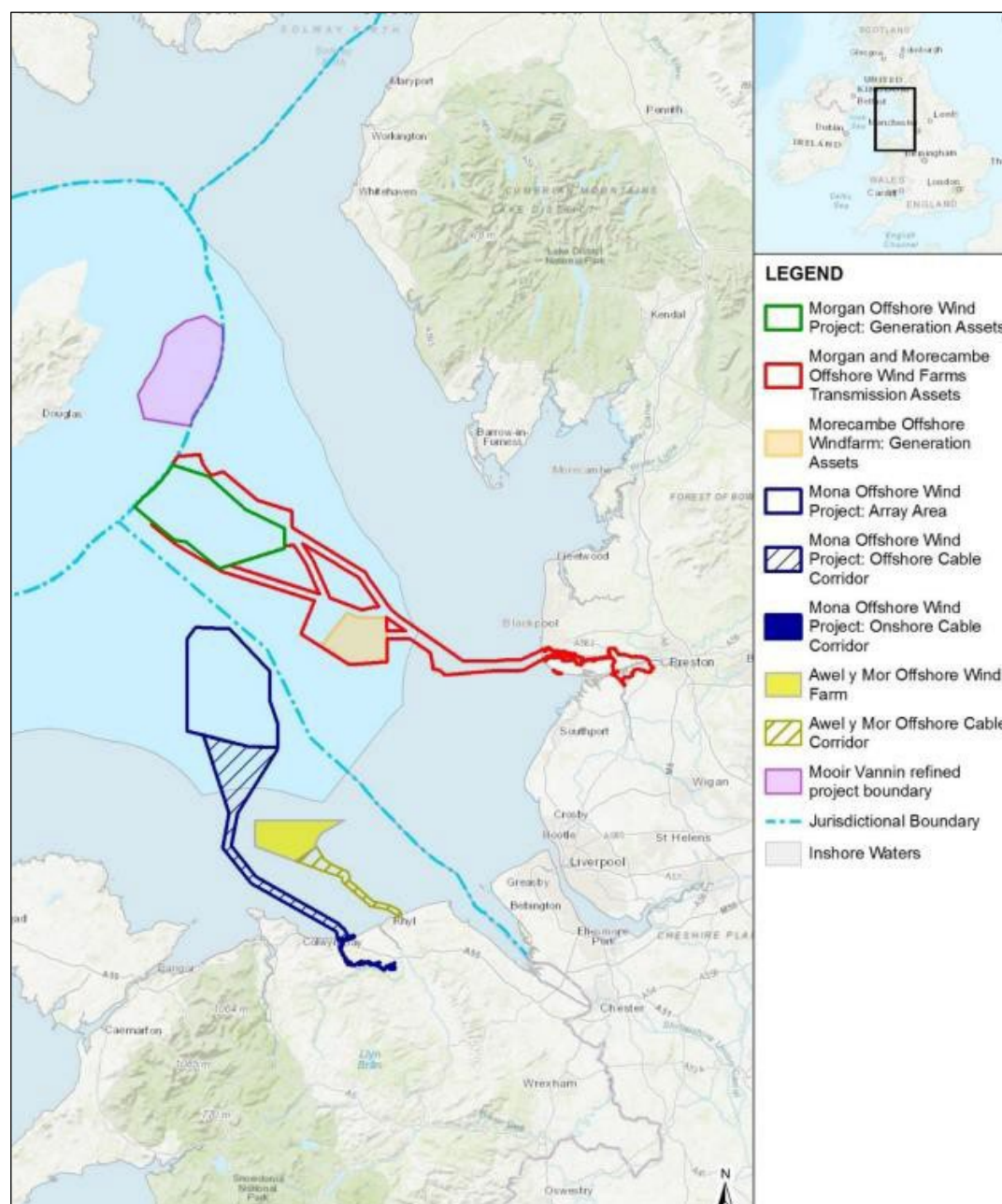
3.4.15. The cumulative effects with the other Irish Sea projects including Mona OWF, Morecambe OWF and the Transmission Assets are considered in each of the topics which follow this section of the Report where relevant. With the objectives of the OTNR in mind, and aiming for a summary document which would inform the Examination but not form part of the ES and its CEA, the ExA requested a report on the interrelationship with other infrastructure projects (interrelationship report) in its Rule 6 letter [\[PD-001\]](#).

3.4.16. This document provided an overview of the proposed development and other projects in and around the Irish Sea as identified in Appendix D of [\[PD-001\]](#), including timings for submission and examinations, construction phasing, the approach taken to coordinate projects, shared survey data, shared mitigation measures, and a summary of direct, indirect, secondary and cumulative effects and any inconsistencies or outstanding matters between the other projects. The other projects included in the interrelationship report were:

- Mona Offshore Wind Farm
- Morecambe Offshore Windfarm: Generation Assets
- Morgan and Morecambe Offshore Wind Farms: Transmission Assets
- Moir Vannin Offshore Wind Farm
- Awel y Môr Offshore Wind Farm

3.4.17. The order limits of the projects included in the interrelationship report is shown below at Figure 6.

**Figure 6: Interrelationship of Morgan Generation Assets with other infrastructure projects<sup>6</sup>**



- 3.4.18. The interrelationship report was submitted at deadline (D) 1 [\[REP1-017\]](#) and updated at D4 [\[REP4-016\]](#) with a final version at D6 [\[REP6-016\]](#).
- 3.4.19. The principal updates made to the interrelationship report were in relation to the progress of the other projects, including Morecambe OWF as it entered its examination in October 2024, and submission of the Transmission Assets DCO application also in October 2024, examination of which had commenced prior to the submission of this Report.

<sup>6</sup> Source: Application Document - Report on Interrelationships with Other Infrastructure Projects, Figure 1.1 [\[REP6-016\]](#) – do not scale.

- 3.4.20. Further updated details and timescales were provided at D4 for the forthcoming submission of the Mooir Vannin OWF application, for which paragraph 1.2.1.5 of the interrelationship report notes the aspiration to submit the Marine Infrastructure Consent (MIC) application to the IoM government in March 2025. At D4 the interrelationship report also referred to a separate forthcoming application for the transmission infrastructure for the Mooir Vannin OWF (the East Irish Sea Transmission Project).
- 3.4.21. As explained further in the ornithology section of this Chapter, the Applicant undertook a review of the CEA to consider the updated information as presented in the Morecambe OWF and the Transmissions Assets applications, amongst other emerging projects. Paragraph 1.9.1.4 of the interrelationship report summarises that for each project reviewed there is no potential for new cumulative effects to arise or an increase in cumulative effects for each of the topics considered. The conclusions of the CEA therefore remained unchanged.
- 3.4.22. A number of RRs included comments relating to the landfall and onshore cable route and substation infrastructure in northwest England for the Morgan Transmission Assets project but no specific comment on the Proposed Development offshore. The Rule 6 letter and its Appendix D [\[PD-001\]](#) subsequently clarified that the ExA were examining the proposed development only, which was wholly offshore, and that separately appointed ExAs would conduct the examinations for the other projects (or the IoM government for Mooir Vannin). The ExA also explained this at the Preliminary Meeting [\[EV1-004\]](#). No subsequent submissions were received relating to the onshore proposals.

#### **Moor Vannin Offshore Wind Farm**

- 3.4.23. Pre-application information in the public domain relating to Mooir Vannin OWF at the time of the Examination included the 2023 scoping report [\[REP3-043\]](#), and further consultation materials published on 15 July 2024 [\[REP3-040\]](#).
- 3.4.24. The ExA asked at Issue Specific Hearing 1 (ISH1) (item 5 [\[EV2-003\]](#)) whether any additional information was available relating to Mooir Vannin OWF which would assist the Examination or which would form an update to the CEA. The Applicant confirmed that whilst the scoping report and limited other consultation materials had been taken into account in its cumulative/ in-combination assessments, it was considered there was insufficient information on which to base a meaningful cumulative assessment with a high degree of certainty.
- 3.4.25. In response to ExQ1 CE 1.5 [\[REP3-006\]](#) the Applicant noted that the consultation materials to date did not include a detailed draft ES or sufficient information upon which a meaningful and robust CEA could be based alongside other OWF projects.
- 3.4.26. Mooir Vannin OWF Limited responded to the same question [\[REP3-039\]](#), [\[REP3-040\]](#), [\[REP3-041\]](#), [\[REP3-042\]](#), [\[REP3-043\]](#), including submission into the Examination of its indicative layout, preliminary environmental information project description, scoping report and scoping opinion. It confirmed that whilst not publicly available, it had completed draft impact assessments to inform its MIC application which it was willing to share with the Applicant on request to ensure a complete assessment. It also provided a timeline, confirming submission of the MIC application was anticipated in March 2025, with examination anticipated July to December 2025.



- 3.4.27. A similar timeline was provided by Mooir Vannin OWF Limited in response to ExQ2 CE 2.2 and CE 2.4 [\[REP5-077\]](#) with a proposed MIC application date of 12 March 2025. It noted that sufficient information about the Mooir Vannin project would be available at the point at which the SoS would normally take a decision on the Proposed Development. It suggested that any relevant cumulative and in-combination effects could be taken into account regardless of whether a decision has been taken on the MIC Application at that point in time.
- 3.4.28. Similarly, the Applicant in response to ExQ2 CE 2.4 [\[REP5-015\]](#) stated that the environmental information in the Mooir Vannin OWF MIC application would be relevant to the assessment of cumulative and in-combination effects of the project and it would be important that the SoS has up-to-date information before them. It considered that the SoS could request submission of an updated CEA during the determination phase. It went on to confirm that engagement with Mooir Vannin OWF Limited would continue but also that it considered submission of the MIC before the close of Examination to be highly unlikely. At the close of the Examination, an application for the Mooir Vannin OWF had not been submitted.
- 3.4.29. Whilst the Mooir Vannin OWF would be located within IoM territory, part of its transmission infrastructure is proposed within English waters with grid connection in northwest England. At the time of close of Examination, the project was in early-stage development with no further information in the public domain except for a Section 35 Direction. Following the inclusion of the project in the D4 version of the interrelationship report [\[REP4-016\]](#), a copy of the request for the Direction was submitted by Mooir Vannin OWF Limited in response to ExQ2 CE 2.5 [\[REP5-070\]](#), [\[REP5-071\]](#), [\[REP5-072\]](#), [\[REP5-073\]](#), [\[REP5-074\]](#), [\[REP5-077\]](#). The indicative offshore location plan [\[REP5-072\]](#) shows its indicative boundary immediately adjoining the order limits of the proposed development.
- 3.4.30. Mooir Vannin OWF's response [\[REP5-077\]](#) set out an anticipated schedule, with submission of an EIA scoping report in the first quarter of 2025 and submission of DCO application in the second quarter of 2026, however at the close of the Examination there was no further information in the public domain.

#### **Stranded assets**

- 3.4.31. Natural England raised concerns in its RR [\[RR-026\]](#), Annex 1] regarding the separation of the Application from the Transmission Assets proposals. It advised that mitigation and potential compensation should be considered promptly and holistically to ensure the timely delivery of the separate projects. It also highlighted the potential for confusion in the post-consent phase in discharging DCO requirements and DML conditions.
- 3.4.32. Natural England stressed the risk of stranded assets and drew attention to its experience of the consenting process for Triton Knoll OWF, which was also subject to separate DCO applications for its offshore wind array and onshore electrical connection. Natural England set out similar concerns at that time, advising that a condition or requirement should be imposed in the DCO preventing commencement until the necessary grid connection consents had been obtained. Natural England advised a similar approach for the proposed development.
- 3.4.33. The Applicant responded [\[PD1-015\]](#) with clarification of the OTNR and output of the HNDR process as explained above. It explained that as the projects were being developed by separate companies, it was not feasible for all aspects of both projects to be consented under a single application. It highlighted the recognition of

the approach in section 4.10 of NPS EN-1 and clarified its approach to CEA including the three-stage process as set out above. It considered the CEA that was undertaken and reported on within the ES is robust and provides the ExA and SoS with full information to properly understand the potential effects of the project as a whole.

- 3.4.34. The Applicant considered a restriction in the DCO such as proposed for Triton Knoll OWF was unnecessary, as it is not going to construct the OWF array without certainty that it could export electricity to the UK grid. It considered Natural England's suggestion that the proposed development could be constructed and become a stranded asset was unrealistic [\[PD1-015\]](#), paragraph 1.2.1.8].
- 3.4.35. The Applicant confirmed in its response that notwithstanding the recommendation of the Triton Knoll OWF ExA to include such a requirement as per Natural England's advice, the SoS disagreed with that advice in its decision to make the Order. This was for a number of reasons including the lack of cumulative effects given the distance between the array area and the onshore works [\[PD1-015\]](#), paragraphs 1.2.1.9 to 1.2.1.13]. This was further explained by the Applicant at ISH1. The Applicant submitted a copy of the recommendation report and SoS decision letter for Triton Knoll [\[REP1-007\]](#) and [\[REP1-008\]](#).
- 3.4.36. Natural England in its response to ExQ1 CE 1.7 [\[REP3-048\]](#) stated that its overarching advice on stranded assets remained unchanged. This was notwithstanding the submission of the Transmission Assets application in October 2024 and noting that the Applicants position on the CEA would be updated to reflect any changes made during the two examinations. Natural England highlighted that the Transmission Assets examination was unlikely to conclude prior to determination of the Proposed Development by the SoS. To manage any risks, it continued to recommend the imposition of a condition along the lines recommended by the Triton Knoll ExA. The Applicant's response maintained that Natural England's concerns were misplaced and the suggested restriction is unnecessary [\[REP4-007\]](#).
- 3.4.37. The relationship between the Transmission Assets application and implications for the CEA and construction timescales is further explored in other sections of this Chapter, and the consideration of requirement 1 of the draft DCO in relation to timescales for commencement and challenge is dealt with in [Chapter 6](#) of this Report.

## **CONCLUSIONS ON OVERARCHING ISSUES**

- 3.4.38. A number of overarching issues were explored during the Examination and many of these issues overlap with those considered in the consideration of the specific topics which follow in this Chapter. The ExA's conclusions on these overarching matters are therefore at a high level and those in respect of need will form part of the overall conclusions in [Chapter 5](#) of this Report.

### **Principle of development, need, climate change**

- 3.4.39. The ExA is satisfied that the Applicant has applied an appropriate methodology within the ES and has sought to contextualise the carbon emissions that would result from the proposed development within all phases and against the whole life of the proposed development.
- 3.4.40. Whilst effects on climate change were not specifically challenged by IPs, the effects on net GHG emissions were contested by shipping IPs and other offshore infrastructure IPs, and the ExA makes conclusions on such matters in sections 3.11



and 3.12 of this Report. In respect of recent cases (Finch and FoE/ South Lakeland), the ExA accepts the Applicant's justification that neither case has implications for its assessment of carbon emissions [[REP5-015](#)].

3.4.41. The ExA accepts that, subject to detailed consideration of the planning issues set out in Sections 3.5 to 3.13 below, all forms of renewable generation including offshore wind, have a role to play in contributing to increased energy supply and security and in meeting net zero targets as set out in NPS EN-1. This need has been reinforced by the publication of the Clean Power 2030 Action Plan.

3.4.42. The ExA concludes that the Proposed Development would make a significant and positive contribution to the urgent need for new renewable generating capacity established by NPS EN-1 to assist with the transition to a low carbon Net Zero economy.

3.4.43. The ExA gives very great positive weight in the final planning balance to the contribution that the Proposed Development would make to satisfying the urgent need for this type of energy infrastructure.

3.4.44. The ExA considers CNP later in this Report in [Chapter 5](#), after consideration of the mitigation hierarchy and residual effects in each topic of this Chapter.

#### **Site selection and alternatives**

3.4.45. The ExA is satisfied that the Applicant has adequately and appropriately described how the array area has evolved together with its explanation of its siting decisions and the steps taken to refine the proposed development prior to submission, taking account of the key constraints and views of key stakeholders. The ExA is also satisfied that good design has been taken into account in accordance with section 4.7 of NPS EN-1.

3.4.46. The ExA has considered the topic of site selection and alternatives in the context of NPS EN-1 paragraph 4.3.22 which advises the consideration of alternatives in a proportionate manner.

#### **Grid connection and other Irish Sea projects**

3.4.47. The consideration of overlapping and cumulative issues with the other projects within and around the Irish Sea listed below were at the forefront of much of the ExAs examination of the proposed development and continue into the assessment of topics in sections 3.5 to 3.13 of this Report.

3.4.48. At the close of the Examination on 10 March 2025, the projects listed below were at the following stages:

- Mona Offshore Wind Project: examination closed 16 January 2025; recommendation submitted to SoS on 16 April with decision expected 16 July
- Morecambe Offshore Windfarm: Generation Assets: examination closed 23 April
- Morgan and Morecambe Offshore Wind Farms: Transmission Assets: examination commenced 29 April
- Awel y Môr Offshore Wind Farm: consented 19 September 2023, not commenced
- Mooir Vannin Offshore Wind Farm: Marine Infrastructure Consent application not submitted

- 3.4.49. Comprehensive levels of environmental information were available to the Applicant for Mona OWF, Morecambe OWF, the Transmission Assets and Awel y Mor. The ExA is satisfied with the Applicant's approach to updating the CEA and in-combination assessment, as well as the interrelationship report during the Examination as those applications progressed. The ExA is satisfied that the overall conclusions of the ES did not change as a result of the emerging detail of those proposals.
- 3.4.50. However, in respect of Mooir Vannin OWF, the ExA accepts that the CEA could not be updated during the Examination given the lack of published environmental information available. More details were available during the Examination relating to shipping and navigation matters, and this is discussed in section 3.11. Once the application for MIC has been submitted to the IoM government a higher level of environmental information will then be publicly available, and an update to the SoS would be necessary.
- 3.4.51. Likewise, whilst no further information is currently in the public domain relating to the transmission infrastructure proposals for connection of the Mooir Vannin OWF to the grid in northwest England (beyond the Section 35 Direction granted in October 2024), in the event that project also progresses further the ExA considers that a similar update would be necessary.
- 3.4.52. The ExA notes that the Transmission Assets application was submitted during the Examination and therefore a high level of environmental information was available to the Applicant. Examination commenced on 29 April 2025. The ExA is cognisant of the OTNR and HNDR process under the Pathway to 2030 workstream, and the reasons for the separation of the generation and transmission assets applications.
- 3.4.53. The ExA is satisfied that the period of time between the examination of the projects is reasonable and that the SoS will have sufficient information before them, including the indirect, secondary and cumulative effects which will encompass information on the proposed grid connections. The ExA also notes that the projects are being progressed by separate companies, albeit with co-ordination of environmental information.
- 3.4.54. The ExA considers that the co-ordination of the applications, including that of Morecambe OWF, is reflective of paragraphs 4.11.7 to 4.11.10 of NPS EN-1. However, the SoS will need to be satisfied that there are no obvious reasons why the other elements are likely to be refused, and the ExA highlights that if consent is granted for one project this should not fetter the ability of the SoS to take subsequent decisions on the related projects (NPS EN-1 paragraph 4.11.13). Nonetheless, the SoS should be cognisant that the Examination for the Transmission Assets is ongoing.
- 3.4.55. In this respect, the ExA is satisfied that the stranded assets issue raised by Natural England in relation to its experience with Triton Knoll should not compromise the decision-making process. The Triton Knoll OWF and transmission applications were submitted and determined several years apart with a much lower level of information regarding the proposals for the onshore transmission to the grid. Furthermore, the examination of the OWF by the ExA (who recommended a Grampian-style requirement) took place in a different policy context to that which is now contained within the updated NPS EN-1 and EN-3.
- 3.4.56. At a high level, the ExA considers that the approach to the CEA and in-combination assessment, including the three-stage process, is robust and the documents

provide sufficient information on indirect, secondary and cumulative effects. The ExA is satisfied that the potential effects of the projects as a whole, with generation and transmission assets, can be properly understood. Furthermore, the ExA concurs with the Applicant that a OWF of such scale and investment would not be commercially feasible without certainty regarding its onshore connection to the grid. The threat of stranded assets is therefore unrealistic, and no requirement or condition is necessary to secure the transmission infrastructure in advance.

## **3.5. AVIATION AND RADAR**

### **INTRODUCTION**

3.5.1. This section considers the effects of the proposed development on civil and military aviation and radar. It should be noted that whilst the effects on access for helicopters to existing oil and gas installations in the Irish Sea is included in the Applicant's environmental statement (ES) relating to aviation and radar, this matter is dealt with in section 3.12 in relation to other offshore infrastructure.

3.5.2. In its consideration of this topic the Examining Authority (ExA) has had regard to the overarching National Policy Statement (NPS) for Energy EN-1 as set out in section 5.5: Civil and Military Aviation and Defence Interests and the NPS for Renewable Energy EN-3 as set out in section 2.8.

### **THE APPLICATION**

3.5.3. The Environmental Statement (ES) Volume 2, Chapter 11: Aviation and Radar [APP-015] presents the assessment of the potential impacts of the Proposed Development on aviation and radar.

3.5.4. ES Chapter 5 is supported by ES Volume 4, Annex 11.1: Aviation and radar technical report [APP-045] which provides a detailed report of aviation and radar activity in the study area. Appendix A of Annex 11.1 comprises a Helicopter Access Report and Appendix B contains an Instrument Flight Procedures (IFP) assessment.

### **Baseline**

3.5.5. Section 11.4 of [APP-015] presents the baseline. It sets out the documents which informed the study, including Civil Aviation Authority (CAA) publications (CAP) relevant to licencing and safety standards. CAP 764 specifically relates to wind turbines. The key data sources and desktop reports are presented which informed the methodologies for radar line of sight (LoS), the helicopter access report and the assessment of IFP.

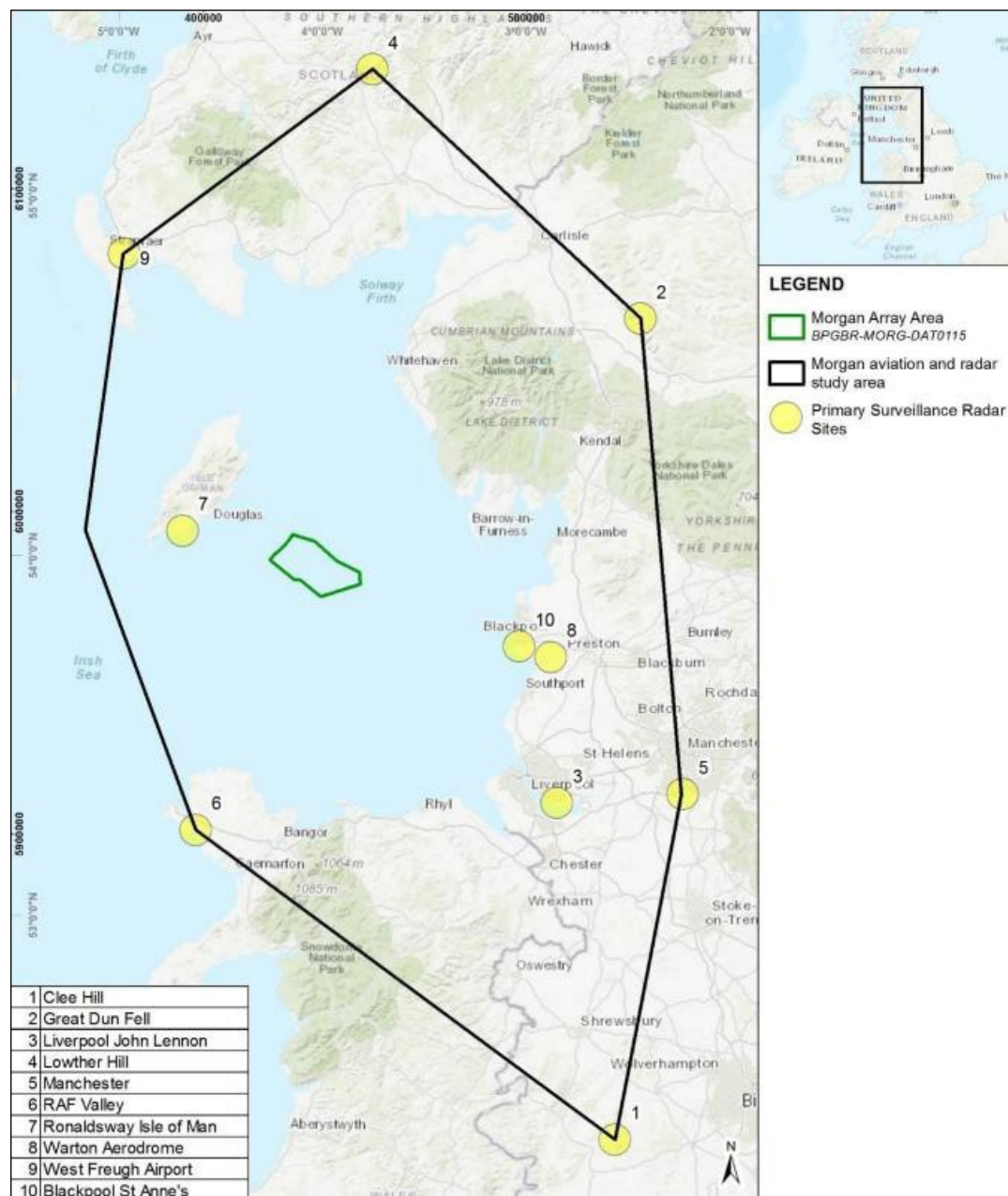
3.5.6. The potential impacts scoped into the assessment during all phases are set out in table 11.5 and those scoped out in table 11.6 of [APP-015], together with justification including reference to the scoping opinion and pre-application consultation with relevant aviation stakeholders. The following were scoped out of the ES:

- Impact on civil and military radar systems during construction and decommissioning phases (when turbine blades would not be rotating)
- Impact to practice and exercise areas (of which there are none in the vicinity of the Proposed Development)

- Impacts to meteorological radar, to helicopter main route indicators, and to aviation secondary surveillance radar (all due to distance from the Proposed Development)
- Impacts to primary surveillance radar (PSR) systems at NATS Clee Hill, Manchester Airport, Liverpool Airport, RAF Valley, BAE Systems Warton and West Freugh

3.5.7. The aviation and radar study area is shown at Figure 7 below. It covers the aviation radar systems that provide coverage over the array area, and which may theoretically detect the highest wind turbine blade tip height of 364m above lowest astronomical tide (LAT). This has been defined on the basis of CAP 764.

**Figure 7: Aviation and radar study area<sup>7</sup>**



<sup>7</sup> Source: ES Volume 2, Chapter 11, Figure 11.1 [APP-015] – do not scale.

- 3.5.8. There are 10 primary surveillance radar (PSR) sites within the study area as listed in the following table:

**Table 1: PSR sites within the study area<sup>8</sup>**

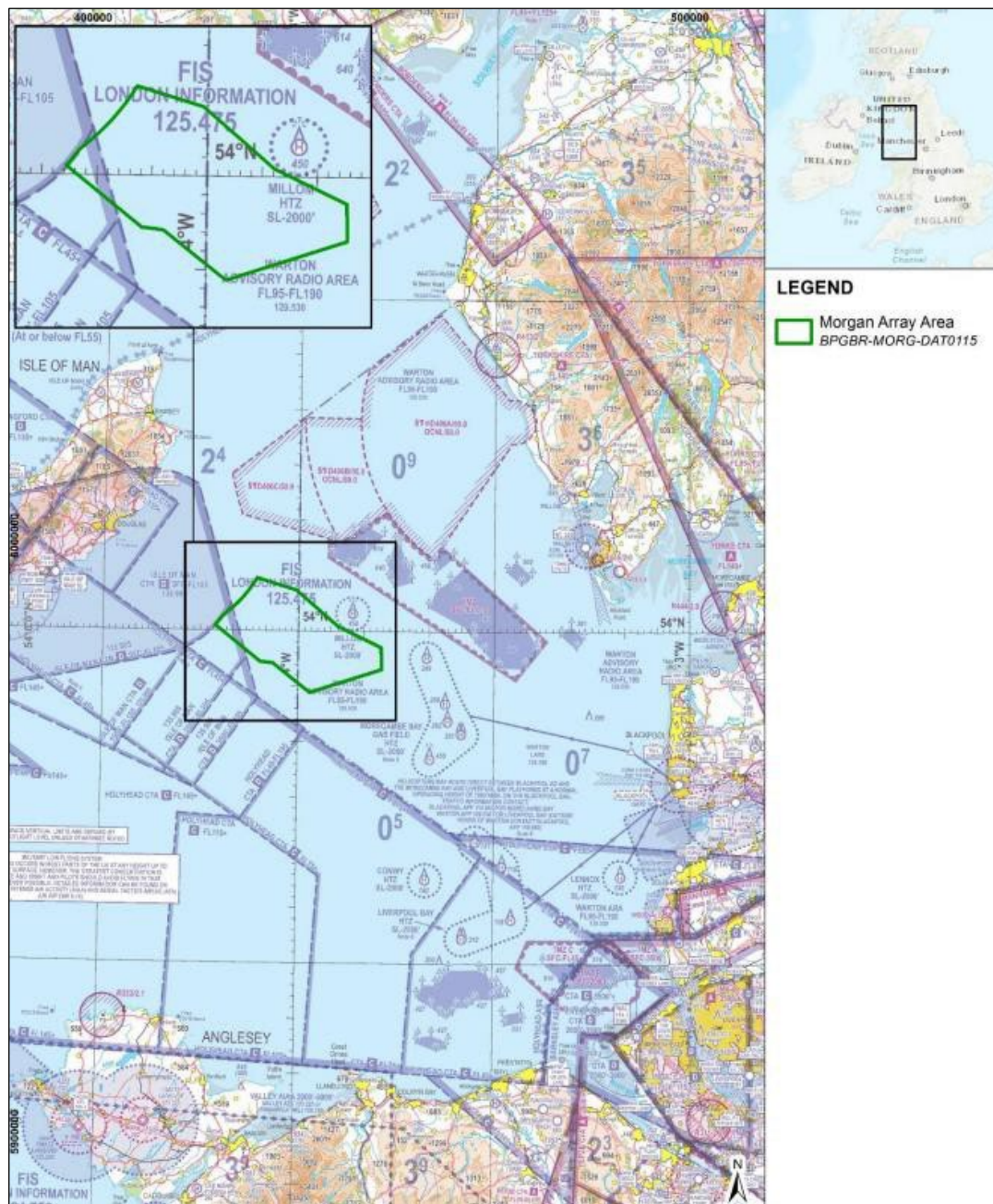
| PSR Site / operator                    | Distance from Morgan Array Area |                 |
|----------------------------------------|---------------------------------|-----------------|
|                                        | Nautical Miles (nm)             | Kilometres (km) |
| Ronaldsway Airport Isle of Man         | 15.4                            | 28.5            |
| St Anne's – NATS (en route) plc (NATS) | 28.6                            | 52.9            |
| Warton Aerodrome – BAE Systems         | 34.2                            | 63.3            |
| RAF Valley                             | 44.3                            | 82.1            |
| Liverpool John Lennon Airport          | 49.3                            | 91.2            |
| West Freugh Air Weapons Range          | 54.8                            | 101.6           |
| Great Dun Fell – NATS                  | 63.4                            | 117.4           |
| Manchester International Airport       | 64.4                            | 119.3           |
| Lowther Hill – NATS                    | 79.0                            | 146.2           |
| Clee Hill – NATS                       | 102.2                           | 189.3           |

- 3.5.9. Radar line of sight (LoS) analysis established that all the turbines of the Proposed Development are highly likely to be within LoS from NATS Lowther Hill, NATS St Anne's (at Blackpool) and from Ronaldsway Airport on the southern end of the Isle of Man (IoM). The LoS analysis results are considered by the Applicant to be conservative in order to establish worst-case impact potential (paragraphs 11.5.1.2 and 11.9.3.2 [\[APP-015\]](#)).
- 3.5.10. In addition to civil airports, aerodromes at military establishments were considered in the scoping exercise, including RAF Valley at Anglesey, BAE Systems at Warton Aerodrome in Lancashire, and BAE Systems at Walney Aerodrome at Barrow-in-Furness. Walney is not equipped with PSR but offers a non-radar air traffic service (ATS) to aircraft that are likely to be flying in the vicinity of the Proposed Development) (paragraph 11.5.1.5 [\[APP-015\]](#)). BAE Systems and its subsidiaries are hereafter in this Report shortened to BAE.
- 3.5.11. The Ministry of Defence (MoD) confirmed in pre-application consultation that impacts to PSR at RAF Valley and BAE Warton are not expected. These were therefore scoped out of the assessment (table 11.6 [\[APP-015\]](#)).
- 3.5.12. Figure 11.2 of [\[APP-015\]](#) shows the airspace construction in the vicinity of the array area and includes the locations of hydrocarbon platforms and is shown in Figure 8 below. Table 11.10 of ES Chapter 11 lists the hydrocarbon infrastructure considered for helicopter access within 9nm of the array area. The airspace is used by both military and civil registered aircraft. A number of published procedures are established within the surrounding airspace depending on the classification of airspace they are operating in and the type of ATS they are receiving, as set out in paragraph 11.5.1.5 [\[APP-015\]](#).

<sup>8</sup> Source: ES Volume 2, Chapter 11, Table 11.9 [\[APP-015\]](#) – do not scale.



**Figure 8: Airspace construction in the vicinity of the Proposed Development<sup>9</sup>**



## Mitigation

- 3.5.13. Primary measures included as part of the project design are set out in table 11.15 [APP-015]. These include the development of, and adherence to, a Design Plan to be prepared and submitted to the Marine Management Organisation (MMO) in consultation with the Marine and Coastguard Agency (MCA), United Kingdom Hydrographic Office (UKHO) and Trinity House prior to construction. The Design Plan would include two lines of orientation for navigation and search and rescue (SAR) access within the array area and consider the relevant marine guidance notes (MGN) and CAP documents as set out in the table. The Design Plan is

<sup>9</sup> Source: Annex 4.2 to the Applicant's response to ExQ1 AR 1.7, Figure 1.1 [REP3-008] – do not scale



secured in the deemed marine licences (DML) and the two lines of orientation are secured through the draft DCO within the DML conditions [\[APP-005\]](#).

- 3.5.14. Tertiary measures include adopted standard industry practices or as secured by requirement in the draft DCO. These include notification of construction, equipment and detailed location and heights of turbines, platforms and meteorological masts to the Defence Geographic Centre, to the MoD's Defence Infrastructure Organisation safeguarding (DIO) unit, and to NATS Aeronautical Information Service. Table 11.15 also sets out that Trinity House and MCA guidance would be adhered to, with appropriate marking, lighting and aids to navigation employed, also secured through requirements in the draft DCO [\[APP-015\]](#). Lighting would also be used on the proposed turbines to CAA and DIO requirements, with higher intensity lighting to peripheral turbines.

### **Assessment of effects**

- 3.5.15. Section 11.9 of ES Chapter 11 [\[APP-015\]](#) sets out the potential effects assessed on aviation and radar arising from the construction, operations and maintenance and decommissioning phases of the proposed development.
- 3.5.16. The maximum design scenario (MDS) considered in assessment of the potential impacts of 'creation of a physical obstacle to aircraft operations' and 'wind turbines causing interference to aviation PSR systems' are set out in (table 11.14 [\[APP-015\]](#)).
- 3.5.17. The Aviation and Radar Technical Report within the ES includes as Appendix B an Obstacle Limitation Surface (OLS) and IFP Assessment that concludes that there would be no impact from the Proposed Development on Blackpool Airport OLS and IFPs with the exception of minimum sector altitude (MSA) for one sector approach, which would need the minimum obstacle clearance area to be increased from 2000 ft to 2200 ft (Appendix B, page 212 [\[APP-045\]](#)).
- 3.5.18. In the construction and decommissioning phases, effects to military and other low flying operations and to helicopter operations are concluded by the Applicant to be of minor adverse significance with primary and tertiary mitigation measures in place as discussed above (paragraphs 11.9.2.23 and 11.9.2.24 [\[APP-015\]](#)).
- 3.5.19. Effects to IFP at Walney Aerodrome, RAF Valley and Ronaldsway Airport are assessed to be moderate adverse before mitigation.
- 3.5.20. During the operations and maintenance phase the wind turbines and offshore substation platforms (OSP) could obstruct military and other low-flying flight operations. Effects to these and to helicopter operations are concluded by the Applicant to be of minor adverse significance with primary and tertiary mitigation measures in place (paragraphs 11.9.2.53 and 11.9.2.54 [\[APP-015\]](#)).
- 3.5.21. Continued engagement with IoM Ronaldsway Airport, RAF Valley via the MoD and Walney Aerodrome was ongoing at the time of submitting the Application regarding potential breach of Surveillance Minimum Altitude Area (SMAA), Air Traffic Control Surveillance Minimum Altitude Chart (ATCSMAC) and MSA. Potential secondary mitigation measures include seeking agreement to raising the MSA/ SMAA altitudes to a level sufficient to provide the required clearance above the wind turbines, in order to reduce residual impacts to minor adverse in all phases with mitigation in place (paragraphs 11.9.2.26 to 11.9.2.31 [\[APP-015\]](#)).

- 3.5.22. Recognising the complex airspace in which the Proposed Development is located, potential effects of interference to NATS Lowther Hill, NATS St. Anne's and Ronaldsway Airport aviation PSR systems are assessed as moderate adverse significance with only primary and tertiary mitigation measures in place as discussed above. Therefore, further engagement and commercial agreement between the Applicant and NATS and the airport authorities affected to find and agree secondary mitigation solutions is recognised as necessary in order to reduce residual effects to minor adverse significance (paragraphs 11.9.3.9 to 11.9.3.14] [\[APP-015\]](#)).

#### **Cumulative effects assessment**

- 3.5.23. Section 11.10 of ES Chapter 11 [\[APP-015\]](#) considers the cumulative effects assessment, with the MDS set out in table 11.17.
- 3.5.24. Cumulative effects for impacts of physical obstacle to military and other low-flying aircraft operations are assessed by the Applicant to be of minor adverse significance in all scenarios and all phases. Interference to PSR systems are assessed by the Applicant to be of moderate adverse significance in all scenarios in the operations and maintenance phase. Additional mitigation is reduced to minor adverse significance with further mitigation in place as described in section 11.9.3 of [\[APP-015\]](#).
- 3.5.25. The assessment states that no aviation and radar monitoring would be necessary to test predictions made for the Proposed Development alone or cumulatively with other projects (paragraphs 11.9.4.1 and 11.11.1.1 [\[APP-015\]](#)).

#### **ISSUES CONSIDERED DURING THE EXAMINATION**

- 3.5.26. Issues considered further during the Examination relating to aviation and radar matters can be broken down into the effects on each of the receptor sites who raised concerns as follows:
- BAE: Walney and Warton Aerodromes
  - MoD/ DIO: Warton (PSR)
  - Blackpool Airport
  - Isle of Man (Ronaldsway) Airport
  - NATS St Annes and Lowther Hill
- 3.5.27. The issues examined vary at each site in relation to whether they are affected by physical obstacles to aircraft operations (IFP and MSA) or to radar systems (PSR), or both. Another common theme which emerged during the latter stages of the Examination, but which is not contained within the ES as a scoped matter, related to very high frequency (VHF) and ultra-high frequency (UHF) communications. Given the similarity of the concerns raised, this is dealt with separately as the final issue in this section. All of the above IPs except NATS made representations during different stages of the Examination in respect of these communications issues.
- 3.5.28. Effects on helicopter access to the Millom oil and gas infrastructure is considered later in this Report in section 3.12: Other offshore infrastructure and sea users.
- 3.5.29. The ExA in its first written questions (ExQ1) requested submission of a consolidated progress report in relation to ongoing engagement between the parties on mitigation for aviation and radar effects for each location [\[PD-004\]](#), AR 1.3]. The first version of this was received at D3 [\[REP3-007\]](#) and then updated at subsequent deadlines

[[REP4-028](#)] and [[REP5-020](#)], with the final version at D6 taking the form of a summary note [[REP6-072](#)].

- 3.5.30. At the end of the Examination, following the ExA's questions in its Rule 17 letter [[PD-012](#)], the Applicant supplied at appendix A (Table A.1) to its response [[REP7-004](#)] a summary of the key remaining tasks and a high-level programme for finalisation of aviation and radar matters. This is specifically in relation to BAE's comments, agreement of requirements and associated mitigation for Walney and Warton aerodromes as further set out below.

#### **BAE: Walney and Warton Aerodromes**

- 3.5.31. In this section reference to 'BAE' encompasses both subsidiaries of BAE Systems involved in the Examination: BAE Systems Marine Limited relating to Walney (Walney Island, Barrow-in-Furness), and BAE Systems (Operations) Ltd at Warton (to the southeast of Blackpool). This is notwithstanding the initial relevant representation [[RR-004](#)] was from BAE Systems Marine Limited in relation to potential obstruction to Walney only.
- 3.5.32. The MoD/ DIO submitted a safeguarding written representation which put forward its concerns relating to the potential to create a physical obstruction to air traffic and potential impacts on radar at BAE Warton [[PD1-019](#)], and these are discussed in the next section of this Report.
- 3.5.33. The separate BAE assets at Walney and Warton, with involvement of the DIO at Warton, were explained at ISH1 [[EV2-003](#)] and further set out in BAE's post-hearing submission [[REP1-042](#)]. The Applicant submitted initial statements of common ground (SoCG) at Deadline (D) 1 with BAE for Walney [[REP1-029](#)] and with the DIO for Warton [[REP1-032](#)]. It confirmed discussions were ongoing, and referenced the position of a joint working approach between the DIO and BAE at Warton [[REP2-005](#)].
- 3.5.34. The D3 version of the SoCG [[REP3-024](#)] confirmed that the Applicant would commission NATS, the CAA Approved Procedures Design Organisation (APDO) for Walney to carry out an IFP assessment, including the unpublished required navigation performance approach to the runway procedures, and that this would inform subsequent actions.
- 3.5.35. BAE and the Applicant provided further updates at ISH2, with the parties confirming discussions were ongoing regarding IFP and MSA at both Walney and Warton. It was clarified that the consultants Osprey were not the APDO for BAE Walney, and NATS were to be commissioned instead. Osprey as the APDO in respect of BAE Warton would undertake the IFP and MSA assessments for that location. It was clarified that the assessments for both Walney and Warton would be at the cost of the Applicant [[REP4-006](#)].
- 3.5.36. The Applicant clarified that no impact was assessed within the Preliminary Environmental Information Report (PEIR), where the maximum turbine blade tip height was 324m. However, a rise to 364m within the Application created the potential for an impact arising from an increase in MSA to 2,200 feet and therefore requiring mitigation. The Applicant explained that mitigation is best deployed once the scale of the wind turbines has been confirmed post-consent. It stated that the mitigation would be a low-cost administrative and procedural process (which does not require the provision of new assets) and would be by application to the CAA to

change the IFP and MSA for this area. The Applicant confirmed that they would meet these mitigation costs [\[REP4-006\]](#).

- 3.5.37. In the event of no mitigation solution or agreement being in place by the end of the Examination, the Applicant sought to address this through inclusion of a DCO requirement. It argued that this approach for including requirements for mitigation of impacts to aviation and radar assets is entirely standard industry practice, with the mitigation solutions and testing to be carried out post-consent [\[REP4-006\]](#).
- 3.5.38. In response to the ExA's question regarding monitoring, both parties agreed that there would need to be adequate testing against the new baseline of the new assets before a mitigation solution could be deemed successful. The Applicant stated that once this has been undertaken and demonstrated as effective, there is no need for further monitoring [\[REP4-006\]](#). The position on monitoring was clarified by BAE in its response to ExQ2 AR 2.5 [\[REP5-061\]](#), where it stated that CAA approval of the mitigation solutions would negate a requirement for ongoing monitoring.
- 3.5.39. BAE also confirmed that it had agreed that mitigation should be handled through DCO requirements, and its preference would be for impacts to be captured by more general requirements that relate to impacts on ATS at both Walney and Warton (ExQ2 AR 2.1 [\[REP5-061\]](#)). The Applicant subsequently added a range of new requirements to the draft DCO at D5, including separate but similarly worded requirements (R) 5 and 6 relating to ATS at Warton and Walney respectively [\[REP5-017\]](#).
- 3.5.40. The D5 version of the Applicant's aviation mitigation progress report [\[REP5-020\]](#) confirmed that the production of the NATS report had now been actioned, but delivery was not expected before the close of the Examination.
- 3.5.41. At D6, the Applicant's aviation and mitigation progress mitigation note [\[REP6-072\]](#), its response to D5 submissions (section 2 [\[REP6-004\]](#)), and its closing statement (section 3.5 [\[REP6-014\]](#)) summarised the issues still under discussion and matters outstanding. It set out that mitigation at Walney is expected to comprise an increase to MSA and amendment to associated IFP, which would reduce effects from moderate adverse significance to a minor adverse residual impact as set out in the ES [\[APP-015\]](#). The details would be subject to the ongoing NATS assessment of current and future IFPs at Walney. It highlighted that the assessment includes an unpublished procedure, which the Applicant was unaware of when undertaking its previous assessment. It expected the report to be available in less than the stated 20 weeks.
- 3.5.42. In relation to cumulative effects, the Applicant reiterated that mitigation to IFP and MSA matters is entirely procedural and that the individual Irish Sea projects cannot create a situation whereby there is a cumulative barrier to delivery of mitigation. If cumulative issues do exist it is in relation to the opportunity to deliver mitigation for more than one project under a single process, but this will only be possible once final layouts and build timelines are known post-consent (paragraph 2.1.1.3 [\[REP6-004\]](#)).
- 3.5.43. The Applicant confirmed its agreement to cover costs for implementation of the mitigation by BAE, where required, through a commercial agreement. Whilst the wording of R7 would not be agreed by BAE until the assessments are completed and conclusions considered, the Applicant considered it to be an appropriately worded and standard requirement, and confirmed that engagement is continuing (section 3.5 [\[REP6-014\]](#)).

- 3.5.44. BAE set out its three outstanding matters in its closing statement [\[REP6-096\]](#) and in its response to the ExA's Rule 17 letter (AR 3.1 [\[REP7-018\]](#)):

*Matter 1: the extent of the impacts on the operation of ATS at Walney and Warton Aerodromes*

- 3.5.45. In matter 1 BAE sought confirmation of the full extent of the impacts of the proposed development (both alone and cumulatively) on the operation of ATS at both Walney and Warton, and whether those impacts require and are capable of being mitigated. It confirmed the NATS and Osprey (as APDOs for the aerodromes) assessments had been commissioned by the Applicant, but that the timescales for their completion and submission were unknown.

- 3.5.46. BAE considered that this gap in information meant there was no sound basis on which to draw firm conclusions on impacts on the operation of ATS at both Walney and Warton, whether they are significant in EIA terms, and whether they are capable of mitigation. BAE strongly disagreed with the Applicant's position that the inclusion of a DCO requirement meant that the matter had been resolved from a consenting perspective. It considered that such a critical consenting issue cannot be resolved in circumstances where the assessment work is ongoing (paragraphs 2.6 to 2.8 [\[REP6-096\]](#)).

*Matter 2: the identification of a viable mitigation solution (following technical and operational assessment) to address the impacts*

- 3.5.47. Matter 2 relates to both PSR and Air Traffic Control (ATC) (both military and civil operations) which are reliant on the PSR. A mitigation proposal had been submitted by the Applicant to the MoD on 21 February 2025 (further discussed in the next section) which requires technical and operational assessments to establish if it is viable. Given that the proposal is non-standard to BAE the timescales for review would extend beyond the close of the Examination. BAE noted that the MoD's objection would remain in place until a viable mitigation proposal has been identified, demonstrated as fit for purpose and capable of addressing the effects on the operation of the PSR (paragraphs 2.9 to 2.12 [\[REP6-096\]](#)).

*Matter 3: the agreement of the wording for requirements*

- 3.5.48. In matter 3 BAE set out that whilst they were in review, requirements to secure mitigation could not be agreed until further progress had been made in respect of the NATS and Osprey assessments (matter 1), as well as the detailed analysis of the mitigation proposal for PSR (matter 2) [\[REP6-096\]](#), paragraphs 2.14 to 2.16]. BAE appended its preferred wording for three separate requirements [\[REP6-096\]](#), and the Applicant subsequently provided a mark-up for BAE prior to D7. BAE noted that whilst some positive progress had been made, key points remained on which the parties are apart. The wording which remains under discussion was highlighted by BAE in its D7 response [\[REP7-018\]](#).

- 3.5.49. The BAE preferred versions of the requirements submitted at D7 include:

- the inclusion of OSPs in the initial trigger for a mitigation scheme to be approved (as well as the wind turbine generators)
- reference to the relevant mitigation scheme remaining in place not just for the lifetime of the development but including the decommissioning period
- the need for the undertaker to 'replace and upgrade' as well as maintain the mitigation scheme to resolve any failure



- reference to ‘new or different’ effects to those identified in the ES
- reference to the MoD or the Operator (or both) in relation to PSR at Warton

- 3.5.50. The reference to OSPs in the draft requirements concerning ATS at both Walney and Warton, was subject to its review of the Applicant’s evidence on LoS received at D7 [\[REP7-005\]](#).
- 3.5.51. The Applicant in its response to the Rule 17 letter confirmed ongoing and constructive dialogue with BAE and provided a high level activity programme for finalising outstanding matters with BAE in Table A.1 of Appendix A of its response [\[REP7-004\]](#). This indicates, in a worst-case scenario, that resolution of the potential impacts to IFPs may not be completed until late in the SoS decision period but should be achievable with time to confirm the mitigation requirements (if required). It expected the NATS and Osprey assessments to confirm the findings of the ES. Irrespective of the timing, only once the wind turbine model is known could the mitigation be finalised. It considered the requirements to be robust and that the consent would not present risk to the aerodromes (AR 3.1 [\[REP7-004\]](#)).
- 3.5.52. The Applicant also noted that the mitigation would be procedural in nature and there is no known reason why it could not be delivered, with BAE not contesting the viability of procedural mitigation. The Applicant confirmed that any update on the position will be provided to the SoS (paragraphs 4.1.1.6 and 4.1.1.7 [\[REP7-004\]](#)).
- 3.5.53. BAE provided comments on the Applicant’s activity programme in response to the Rule 17 letter (AV 3.1 point 15 [\[REP7-004\]](#)) as follows:
- The programme is contrived, at best aspirational and limited in terms of the reliance which can be placed upon it. In reality, significant resources and third party input will be required to be drawn upon in respect of a number of the activities referred to in the programme and achievement of the various milestones identified will have to be kept under constant review (and regular updates provided to the Examining Authority and to the Secretary of State, as required) (AR 3.1 [\[REP7-018\]](#)).*
- 3.5.54. BAE concluded in its closing submissions that Walney and Warton aerodromes are considered critical national infrastructure, providing essential services to support national security. It stated that the proposed development cannot impede them in fulfilling this crucial function or compromise their ability to deliver on an uninterrupted basis, national sovereign defence capabilities and safe airport operational and air traffic services that are fit for purpose for both civil and military aircraft operations. It considers it imperative that a satisfactory resolution is reached in respect of outstanding matters 1 to 3 before the determination of the Application (paragraphs 3.1 and 3.2 [\[REP6-096\]](#)).

*ExA considerations on BAE Walney and Warton*

- 3.5.55. The ExA is in agreement with the Applicant’s position as originally set out in the ES [\[APP-015\]](#) that residual effects on MSA and IFP at BAE’s aerodromes would be moderate adverse without mitigation, and this is significant in EIA terms.
- 3.5.56. The ExA notes that whilst dialogue between the parties was regular and generally positive, a number of issues in relation to both Walney and Warton came to light during the latter stages of the Examination. In particular, the consideration of VHF/ UHF communications (dealt with in a separate section below) and the suggested addition of OSPs to the requirements, the need to assess an unpublished procedure, and the relatively late commissioning of the relevant assessments by



NATS and Osprey. Completion dates for the assessments were unknown at the close of the Examination. These issues manifested in the disagreement of the wording of requirements at the end of the Examination.

- 3.5.57. The Applicant's timetable for review of the assessments, agreement of the mitigation and the requirements (Table A.1 of Appendix A [\[REP7-004\]](#)) is useful in providing focus. The ExA note that it is a tight timescale in which to establish agreement on the matters set out by BAE. Nonetheless, the ExA is satisfied that the outstanding matters set out by BAE are capable of being resolved and should not prevent the Proposed Development.
- 3.5.58. The ExA is satisfied that OSPs do not need to be included in the requirements further to a review of the Applicant's evidence on the LoS of the platforms received at D7 [\[REP7-005\]](#).
- 3.5.59. In the event that BAE continues to disagree with the wording of requirements prior to the SoS making a decision, the ExA is satisfied that the requirements in the draft DCO would provide adequate assurances to the SoS that any necessary mitigation can be secured post-consent. The ExA's recommended minor amendments to the DCO requirements are discussed in the overall conclusions from paragraph 3.5.119 of this Report.

**DIO: Warton**

- 3.5.60. The MoD's DIO together with its radar operator BAE adopted a joint working approach regarding Warton aerodrome, as explained at ISH1 [\[EV2-003\]](#) and [\[REP1-042\]](#).
- 3.5.61. The DIO's WR set out that its own assessment had shown that the Proposed Development may have detrimental effects on the performance of PSR, including the desensitisation of radar in the vicinity of the turbines, shadowing and the creation of unwanted aircraft returns causing unacceptable and unmanageable interference to the effective operation of ATC radar deployed at BAE Warton. It explained that the creation of unwanted returns displayed on the radar leads to increased workload for both controllers and aircrews. Furthermore, real aircraft returns can be obscured by a turbine's radar return, making the tracking much more difficult [\[PD1-019\]](#).
- 3.5.62. The DIO also noted that the addition of turbines would introduce a physical obstruction to low flying aircraft. The DIO sought a requirement for the submission, approval and implementation of an aviation lighting scheme, and for sufficient data to be submitted to ensure that structures can be accurately charted to allow deconfliction [\[PD1-019\]](#). The SoCG [\[REP6-076\]](#) sets out agreement of R3 in the draft DCO which covers these matters. Therefore, it is only effects on PSR on which the DIO has remaining concerns.
- 3.5.63. The Ørsted IPs (specifically for Walney Extension Limited and Burbo Extension Ltd) noted [\[RR-043\]](#), [\[RR-007\]](#), [\[PD1-024\]](#) that they are implementing mitigation in relation to potential impacts on the Warton PSR. They sought assurances that the Proposed Development would not adversely affect or increase the cost of such mitigation, and that the Applicant would contribute to costs if it made use of this mitigation. The Applicant responded that it has no reason to believe that the proposed development might adversely affect or increase the cost of mitigation put in place by Walney Extension Limited nor Burbo Extension Ltd relating to Warton PSR (tables 2.7 and 2.43 [\[PD1-017\]](#)).

- 3.5.64. The Applicant pointed out the DIO's pre-application consultation response [\[APP-103\]](#) did not anticipate operational impacts on either of its radars (at RAF Valley as well as Warton). The Applicant subsequently increased the maximum turbine blade tip height from 324m (at PEIR) to 364m above lowest astronomical tide prior to submission of the Application. The MoD responded to the increase in height that again it did not anticipate an operational impact on the radars. Therefore, it was not scoped into the ES, but the Applicant confirmed it would engage with DIO on the matter of suitable technical mitigation to reduce the impact to Warton PSR (Table 3.1 [\[PD1-017\]](#)).
- 3.5.65. In its response to ExQ2 AR 2.1 and AR 2.5 [\[REP5-063\]](#) the DIO clarified its position that it was unable to move from a position of objection until the Applicant submitted a viable mitigation scheme for impacts on the PSR at Warton. It was unable to agree to the requirement in the draft DCO as the mitigation was as yet unspecified nor reviewed. It also did not agree with the Applicant's position on monitoring until the mitigation was known and secured by agreed requirement.
- 3.5.66. The Applicant pointed out that a non-disclosure agreement had prevented the exchange of relevant information about the current radar, resulting in a lack of clarity as to the baseline. It clarified that the necessary comfort could be given through a 'clean sheet' exercise and presentation of a mitigation that is blind to the baseline but clarifies the viability of future mitigation. The Applicant explained that the requirement is generic, following a standard form previously agreed by the DIO in other DCOs, which do not have provision for monitoring of mitigation post-installation [\[REP6-004\]](#) and [\[REP6-014\]](#).
- 3.5.67. At the end of the Examination BAE set out radar within the second of its 3 outstanding matters in its closing statement [\[REP6-096\]](#) and in its response to the ExA's Rule 17 letter (AR 3.1 [\[REP7-018\]](#)) (as set out in the preceding section of this Report), explaining that the PSR mitigation details and relevant requirement would need to be settled following further engagement with both the DIO and BAE.
- 3.5.68. The final SoCG with the DIO [\[REP6-076\]](#) included agreement between the parties on a range of matters including EIA methodology, and that the operation of the Proposed Development would cause unacceptable and unmanageable interference to the effective operation of ATC radar deployed at BAE Warton so it is the Applicant's responsibility to provide a suitable technical mitigation solution. The Applicant submitted a mitigation proposal to the DIO on 21 February 2025, shortly before close of the Examination [\[REP6-076\]](#).
- 3.5.69. The DIO confirmed this was being assessed to determine whether it is both technically and operationally acceptable. It stated that the statutorily safeguarded asset is of a type that is new to the operator (BAE) and as such it is likely that the MoD's target timescale of 6 weeks would be exceeded. As such, the SoCG [\[REP6-076\]](#) indicated that the DIO was not in a position to agree the wording of draft DCO R6 until the assessment of the mitigation proposal is complete and it has been demonstrated as viable, therefore the objection remains outstanding.
- 3.5.70. Following further information sought by the ExA in its Rule 17 letter [\[PD-012\]](#) regarding timings, the Applicant's high level activity programme at Table A.1 of Appendix A [\[REP7-004\]](#) indicates that the DIO's confirmation regarding the requirement for Warton is likely to be in the final weeks of the ExA's reporting period and before the SoS decision period.

### ***ExA considerations on DIO Warton***

- 3.5.71. The ExA acknowledges that the Applicant's ES [\[APP-015\]](#) scoped out impacts to PSR at Warton. This followed its LoS analysis which concluded that the system will not theoretically detect the operational wind turbines [\[APP-045\]](#). The ExA also notes the pre-application consultation response stating that impacts to both RAF Valley and BAE Warton PSRs were not expected.
- 3.5.72. The ExA acknowledges the position taken by both the DIO and BAE regarding PSR at Warton during the Examination, as a result of their own assessments based on the increase in turbine blade tip height following PEIR stage. The ExA is satisfied with the efforts made by the Applicant to engage with the DIO both in pre-application stage and during the Examination, in putting forward a mitigation strategy and seeking to agree a requirement.
- 3.5.73. At the close of the Examination, the submitted mitigation strategy was under review by the DIO and will subsequently need to be agreed by BAE. Whilst a specific requirement relating to PSR at Warton had been put forward by the Applicant at D6, it remains not agreed by the DIO. The proposal is new to BAE and as such agreement is expected to take longer than the usual timescales. This is a matter which the ExA would expect the parties to update the SoS on following submission of its report, and the submissions do not give any reason why this could not take place within the determination period. There is no evidence before the ExA that mitigation is not achievable within the time limit for implementation.
- 3.5.74. There is currently a lack of information to satisfy the ExA that unmitigated impacts would not present risks to national security and physical safety. Nonetheless the ExA is content that a Grampian type requirement (so no part of any wind turbine can be constructed until a radar mitigation scheme has been submitted to and approved in writing by the Secretary of State) can be attached to secure mitigation, so that consent may be granted in this respect and in accordance with NPS EN-1 paragraph 5.5.60.
- 3.5.75. Without alternative wording of a requirement being put forward by the DIO, the ExA is content that the Applicant's proposed R6 can be included in the recommended DCO. The ExA agrees that this is a standard requirement used in other DCOs.

### **Blackpool Airport**

- 3.5.76. The Applicant's response to Blackpool Airport's initial comments on safeguarding and impact on the operation of aircraft [\[RR-006\]](#) clarified that its assessment on Blackpool Airport for OLS and IFP was considered within Appendix B of [\[APP-045\]](#) which concluded that there will be no impact to currently published Blackpool Airport IFP or MSA (table 2.6 [\[PD1-017\]](#)). Blackpool Airport did not submit a written representation at D1.
- 3.5.77. The initial draft of the SoCG [\[REP1-028\]](#) indicated that Blackpool Airport disagreed with the scoping out of impacts to IFP and MSA at the Airport, as well as VHF. It disagreed with the study area being limited to 17km for non-radar units, given that Blackpool is an approach control unit with a designated operational coverage of 40 nm.
- 3.5.78. Overall, Blackpool Airport was unable to agree that there would be no significant effects whilst the airport was awaiting its IFP safeguarding assessment which is part of its update to its five-year review of its flight procedures as requested by the CAA.

Blackpool Airport could not provide an estimate when approval and implementation of the finalised instrument approach procedures would be received, nor the need for mitigation measures, until the process is complete. The Applicant stated that it would work with Blackpool Airport to ensure that appropriate mitigation is in place so that the Proposed Development would not have a significant effect on its MSA [\[REP1-028\]](#).

- 3.5.79. In response to ExQ2, Blackpool Airport confirmed that the five-year review of IFPs to runway 28 had been reviewed internally and forwarded to the CAA for their comments, however the review of runway 10 had not yet been received. It disagreed with the Applicant's summary [\[REP4-028\]](#) that a requirement was unnecessary on the basis that there is no certainty that an impact will arise. It stated that adequate mitigation for MSA and IFPs depends on the outcome of the CAA review. It noted that should CAA approvals not be obtained by the end of the Examination, a requirement should ensure that any appropriate mitigation can be secured, and attached the wording of a requirement recently agreed in the Mona OWF examination [\[REP5-062\]](#), AR 2.1 and AR 2.3]. Blackpool Airport further substantiated its request at ISH3, including in relation to VHF, and wording was requested which would be consistent with the Mona and Morecambe draft DCOs [\[EV6-011\]](#), action point 3].
- 3.5.80. Subsequently, the Applicant added R9 to the draft DCO [\[REP6-017\]](#) which aligned with the Mona OWF examination and broadly covered all ATS matters (IFP, MSA and VHF) at Blackpool Airport rather than the two separate requirements for ATS and VHF included in the D5 version [\[REP5-017\]](#). The Applicant understood that if agreement was reached on the requirement, Blackpool Airport's concerns could be closed out [\[REP6-004\]](#), section 3] and [\[REP6-014\]](#), section 3.4]. This was also reflected in the final SoCG [\[REP6-073\]](#).
- 3.5.81. The aviation mitigation progress report mitigation note [\[REP6-072\]](#) stated that the Applicant had agreed to cover the costs of the implementation of any mitigation through a commercial agreement, which was to be finalised.
- 3.5.82. Late in the Examination, Blackpool Airport requested that the requirement also included reference to the OSPs as a restricted construction activity in addition to the wind turbines (similarly to BAE). The Applicant resisted this, stating that its low height means that the OSP is not material to aviation matters, and that the OSP could otherwise be installed well in advance of the wind turbines, adding unnecessary scheduling risk to the project (section 3 [\[REP6-004\]](#) and section 3.4 [\[REP6-014\]](#)).
- 3.5.83. Blackpool Airport's response to the Rule 17 letter [\[PD-012\]](#) noted that to date the Applicant had failed to provide evidence that the OSP would not impact on the Airport's operations and that reference to OSPs was accepted by the applicant of the Morecambe OWF. In the event that the Applicant was to provide technical comfort that the OSP is not a material concern, Blackpool Airport would consent to removal of the OSP text from the requirement [\[REP7-013\]](#).
- 3.5.84. At the close of the Examination, the Applicant submitted a quantitative technical LoS assessment [\[REP7-005\]](#) focused on Warton, where it anticipated that similar results would be obtained for Blackpool Airport due to the similar ranges and littoral profiles. It noted that the Airport had not previously highlighted any impacts on its systems from existing oil and gas infrastructure in Morecambe Bay, which has platforms with similar characteristics to the Morgan OSPs. The Applicant set out that the LoS assessment should provide comfort prior to their own operational

assessments in line with CAP670 Appendix A Gen 02, and ultimately that OSPs do not need to be included in the requirement (section 3 [\[REP7-004\]](#)).

- 3.5.85. The only change to requirement 9 for Blackpool Airport in the final D7 version of the draft DCO [\[REP7-007\]](#) was to exclude reference to wind turbine foundations in the restrictive trigger.

***ExA considerations on Blackpool Airport***

- 3.5.86. The ExA acknowledges that the review of the five-year assessments for the runways at Blackpool Airport by the CAA is ongoing (as is its assessment of effects on VHF) and therefore any effects from the proposed development on ATS which may necessitate mitigation are uncertain. A requirement is therefore appropriate to cover this.
- 3.5.87. Blackpool Airport, in common with BAE, have suggested that OSPs are added to the wording of Requirement 9. The ExA agrees with the Applicant that OSPs do not need to be included in the requirements further to a review of the Applicant's evidence on the LoS of the platforms [\[REP7-005\]](#). The ExA considers that draft DCO R9 as amended at D7, which aligns with that put forward for Mona OWF, (subject to minor amendments as set out from paragraph 3.5.125 of this Report) would meet the tests and provide adequate assurances to the SoS that mitigation can be secured.
- 3.5.88. The ExA understands that a commercial agreement is being finalised with Blackpool Airport in terms of covering their costs however this does not have bearing on the ExA's considerations.

**Isle of Man (Ronaldsway) Airport**

- 3.5.89. The IoM TSC [\[RR-015\]](#) requested continued engagement to ensure the safety of the island's air travel would not be compromised, and appeared at ISH1, where it referred confirmed that a surveillance strategy and survey report of the effects from the multiple OWFs was being carried out [\[EV2-002\]](#).
- 3.5.90. Mooir Vannin OWF Limited [\[RR-021\]](#) highlighted that there was a lack of clarity on how the cumulative impacts had been identified on PSR systems, and how mitigation would be applied. The Applicant referred to the Airport's change in position to commissioning a third-party review of its surveillance strategy report, taking on board all applicable proposed offshore and onshore wind farm projects. The Airport anticipates implementing the results of the surveillance strategy and requesting relevant projects to contribute to reach a mutually agreed mitigation solution which would reduce any impact to acceptable levels (table 2.21 [\[PD1-017\]](#)).
- 3.5.91. The first draft of the SoCG with IoM Ronaldsway Airport [\[REP1-038\]](#) noted that the proposed development could have potential significant effects on the PSR system. Mitigation in the form of radar blanking and airspace change application for a Transponder Mandatory Zone (TMZ) and/ or improvement of the airport MultiLATERation (MLAT) system would be confirmed following the review of the Airport's surveillance strategy report. It stated that discussions were ongoing subject to the outcome of the strategy to manage air traffic safeguarding, which would consider the proposed development together with the Cair Vie onshore wind farm on the IoM as well as the Irish Sea OWFs, in order to establish mitigation requirements.



- 3.5.92. It was an agreed matter that the potentially significant effects of the proposed development on flight procedures at Ronaldsway Airport identified in the IFP assessment would be reduced to minor adverse significance with the implementation of mitigation to raise the impacted altitudes. Lack of consideration of, and potential impacts on, VHF communications was also raised in the SoCG [\[REP1-038\]](#).
- 3.5.93. The Applicant followed up at D2 with confirmation that an executive summary of the report had been received with identification of the proposals for radar mitigation, and that discussions were ongoing [\[REP2-007\]](#). The assessment, in relation to effects from Mona and Morgan OWFs, concluded that no impact was expected on navigational aids and that as a whole the MLAT network should be relatively tolerant to obstructions of this nature. Any effects would be limited to the area in and around the turbines at low level altitudes equivalent to the heights of the turbines themselves [\[REP4-040\]](#).
- 3.5.94. The Applicant highlighted that CAP764 makes it clear that to justify an objection in planning, the aviation stakeholder must determine if the impact on the communications, navigation or surveillance equipment has a detrimental impact on the ATS it provides, but noted that this had not been undertaken [\[REP5-009\]](#), table 2.1]. Nonetheless, and in respect of the lack of technical impact expected on the MLAT system, the Applicant accepted that there is potential for a material impact to the PSR. It provided a requirement for the IoM Airport with wording that allows for the mitigation of other impacts (MLATs and VHF communications), should further evidence demonstrate that they would arise in due course (table 2.1 [\[REP5-009\]](#) and [\[REP5-020\]](#)).
- 3.5.95. At D6, the Applicant set out that new wind turbine resilient PSR was to be purchased and commissioned to address several proposed offshore and onshore wind energy projects. The Applicant agreed to part cover the costs for implementation of this mitigation through a commercial agreement, which was still to be finalised. It confirmed that the requirement had been agreed between the parties [\[REP6-072\]](#) and that mitigation would reduce the effects on Ronaldsway Airport from moderate to minor adverse (not significant). It confirmed that technical detail and agreement on the mitigation solution, and finalisation of commercial agreement, would complete after the close of the Examination (section 3.2 [\[REP6-014\]](#)).
- 3.5.96. The final SoCG with Ronaldsway Airport [\[REP6-085\]](#) sets out agreement on all matters, including the baseline, assessment methodology and effects from the proposed development both alone and cumulatively with other Irish Sea projects. This is subject to some provisos, including that Ronaldsway Airport retains its position that the exact impact of development on MLAT assets may not be known until operation.

#### ***ExA considerations on Isle of Man (Ronaldsway) Airport***

- 3.5.97. The ES [\[APP-015\]](#) originally anticipated that technical mitigation would involve the installation of additional MLAT sensors, and/ or radar blanking, and an airspace application for a TMZ which would reduce residual effects from moderate to minor adverse significance (not significant in EIA terms).
- 3.5.98. The ExA acknowledges the change in circumstances since the production of the ES (and the associated pre-application consultation). Ronaldsway Airport's surveillance strategy has since established that a new PSR would address the effects from the proposed development together with the other wind farms and would also result in



reducing effects to minor adverse and not significant. The ExA notes that this was confirmed late in the Examination, as was the Applicant's intention to complete a commercial agreement.

- 3.5.99. Notwithstanding the type of mitigation solution which is ultimately commissioned, the ExA is content that the broadly worded requirement in the final draft DCO would ensure that it is agreed and delivered (together with other effects, if required, such as to MLATs and VHF communications). The requirement has been agreed between the parties and therefore whilst the type of mitigation remains an outstanding matter, it could be appropriately dealt with post-consent.

#### **NATS St Anne's and Lowther Hill**

- 3.5.100. NATS raised concerns in its RR regarding the impact to its radar infrastructure, with a risk of degrading its ability to provide a safe and expeditious ATS in the area [\[RR-025\]](#).
- 3.5.101. The Applicant's response in Table 2.25 of [\[PD1-017\]](#) referred to a draft mitigation and service contract, which it expected to be agreed prior to the close of the Examination. Nonetheless, a fallback requirement in the draft DCO would secure a radar mitigation scheme for PSR at St Anne's and Lowther Hill prior to operation. The first version of the aviation progress report [\[REP3-007\]](#) set out that mitigation includes large radar blanking and an air space change procedure for a TMZ, and the Applicant had agreed to cover the costs through a commercial agreement.
- 3.5.102. The final SoCG [\[REP5-052\]](#), the D5 aviation and radar mitigation progress report [\[REP5-020\]](#) and D6 summary note [\[REP6-072\]](#) indicate that whilst the completion of the commercial agreement remained outstanding, all other matters were agreed, including the wording of a requirement in the draft DCO.

#### **ExA considerations on NATS St Anne's and Lowther Hill**

- 3.5.103. The ExA notes from the position at D6 that whilst a commercial agreement has not yet been completed, R4 is agreed with NATS. Engagement is continuing and the ExA expects the Applicant to provide an update to the SoS to confirm completion of the agreement and that the concerns of NATS are removed. If this occurs during the determination period, R4 could be removed from the recommended DCO.

#### **VHF and UHF communications**

- 3.5.104. The consideration of effects of the proposed development on high frequency communications was initially raised by both Blackpool Airport and Ronaldsway Airport as part of the first drafts of their respective SoCGs. Blackpool Airport stated that the proposed development may result in interference to communications with low level aircraft including offshore helicopters, the Coastguard and others, impacting on service provision and leading to safety implications. The Applicant clarified that effects on VHF had not been scoped into the assessment on the basis of distance from the airports, and it highlighted that no concerns were raised as part of pre-application stakeholder consultation (table 1.6 [\[REP1-028\]](#) and table 1.6 [\[REP1-038\]](#)).
- 3.5.105. In response to ExQ1 AR 1.4 the Applicant explained that a consultation zone of 10km was provided for by NATS and this was taken as the baseline, and up until recently air navigation service providers had not highlighted a concern beyond this distance. It also noted that Blackpool Airport has existing operational wind turbines closer to its infrastructure than the proposed development, so any turbine impacts

would have been manifested already. The Applicant did not consider effects on VHF communications to be a relevant issue, but would consider any evidence the airports provided to substantiate their concerns [\[REP3-006\]](#).

- 3.5.106. Blackpool Airport did not respond to ExQ1 AR 1.4, but later confirmed that it was commissioning its own assessment and disagreed with the Applicant's view that an impact on VHF communications is not likely [\[REP5-062\]](#).
- 3.5.107. The Applicant responded to Ronaldsway Airport's technical safeguarding assessment [\[REP4-040\]](#) that it demonstrates that there would be no material reduction in the ability to provide VHF related ATS, and that the broadly worded draft DCO requirement allows for resolution of such matters should they arise (table 2.1 [\[REP5-009\]](#)). Ronaldsway Airport provided further explanation for its concerns, noting the difficulty modelling scenarios for larger turbines and suggested a 'wait and see' approach could be taken, and provided suggested requirement wording (ExQ2 AR 2.4 [\[REP5-066\]](#)). The final SoCG sets out that whilst VHF matters were not captured in the original ES chapter assessment, Ronaldsway Airport is in agreement that the broad nature of the proposed requirement to protect the provision of ATS ensures that no significant impacts in EIA terms are anticipated [\[REP6-085\]](#).
- 3.5.108. The MCA (ExQ2 AR 2.4 [\[REP5-069\]](#)) noted that OWFs can potentially affect shore-based VHF radio coverage and that developers are required to consult with the MCA pre-construction, referring to MGN 654 annex 5 section 6.1 for further information and guidance.
- 3.5.109. BAE raised concerns regarding effects on both VHF and UHF communications at ISH2 [\[EV4-007\]](#), explaining that the issue had arisen following CAA advice. It followed up with a response to ExQ2 AR 2.4 [\[REP5-061\]](#) regarding the Applicant's intention to commission NATS to undertake an assessment of potential impacts on VHF and UHF communications at both Walney and Warton aerodromes, stating that it was unaware if this had commenced.
- 3.5.110. The Applicant explained that the matter had arisen following an issue at a single location (Prestwick in Scotland), and that it was related to a particular set of circumstances. The Applicant noted that BAE had not historically noted any detrimental impact on its VHF assets at Walney, despite the co-existence with a number of offshore windfarms in the wider environment. Furthermore, extensive tests (including flight trials) undertaken at North Hoyle windfarm noted no reduction in communications. The Applicant concluded in response to ExQ2 AR 2.4 that given the lack of evidence that there is impact, there is no potential for a significant environmental effect that needs to be considered through the EIA [\[REP5-015\]](#).
- 3.5.111. It remained the Applicant's position at the end of the Examination that there is no potential for detrimental impact to be considered with regards to VHF communications. It pointed out that no IP had so far brought forward evidence that such an impact will arise. Notwithstanding, the Applicant sought to provide comfort to the relevant IPs by including broadly worded requirements that ensure that should detrimental impacts to ATS arise and be demonstrable, mitigation would be delivered [\[REP6-014\]](#).
- 3.5.112. The final SoCG with BAE [\[REP6-074\]](#) confirmed ongoing discussion with BAE to the outcome of the NATS assessments, and as such the requirements remain not agreed.

- 3.5.113. In the final SoCG with Blackpool Airport [\[REP5-062\]](#), it is noted that the Applicant has financially supported the delivery of a VHF assessment by Blackpool's APDO, and that the parties are engaging on a commercial side agreement to offset costs incurred by the Airport for implementation of any necessary mitigation. Whilst the requirement was largely agreed, Blackpool Airport included at Appendix 1 of the SoCG additional wording regarding the trigger for agreement of mitigation, to include OSPs as well as wind turbines. The Applicant resisted the inclusion of this additional wording (as explained earlier in this section of the Report).
- 3.5.114. In response to the ExA's Rule 17 letter [\[PD-012\]](#), Blackpool Airport stated that should mutually acceptable evidence be provided by the Applicant to demonstrate that the OSPs would not impact on the Airport's operations, it would consent to removal of this additional text from the requirement [\[REP7-013\]](#). At D7 the Applicant's LoS assessment in relation to OSPs [\[REP7-005\]](#) sought to demonstrate that the OSPs would have no such effect and do not need to be included in the aviation requirements [\[REP7-004\]](#).

### ***ExA considerations on VHF and UHF communications***

- 3.5.115. The ExA understands that the matter remains outstanding for all IPs at the close of the Examination. It is unfortunate that this issue arose at a relatively late stage and that VHF effects are unknown and was not raised during pre-application consultation so was not included in the ES. There is generally a lack of evidence from the IPs that adverse effects would arise, particularly given the presence of existing offshore infrastructure including OWFs which are closer to the affected aerodromes. The ExA also notes the lack of specific guidance on the matter in relation to the larger scale of the turbines proposed.
- 3.5.116. The ExA agrees that requirements could cover any mitigation that may be required, but only if adverse effects are identified by the assessments. The assessments are ongoing both by NATS on behalf of the Applicants, and separate assessment by Blackpool Airport. The requirements are broadly worded and also capture other effects, but the ExA is content that they would be sufficient and would meet the relevant tests.
- 3.5.117. Only Ronaldsway Airport is in agreement with the wording of its requirement. BAE and Blackpool Airport's requests to add the OSPs to their requirements was received very late in the Examination, giving little time for both the Applicant to respond and for the ExA to examine it. The ExA considers that the agreement of the inclusion of OSPs by the Morecambe applicant in a similar requirement is not adequate justification, nor should it set a precedent, given that the issue had not been fully examined by the close of the Morgan Examination.
- 3.5.118. The ExA considers the submission of the LoS assessment at D7 by the Applicant gives sufficient comfort that the OSPs would not affect high frequency communications at Warton (and correspondingly to Blackpool Airport and Walney) and the additional wording to the requirements is therefore unjustified.

## **CONCLUSIONS**

- 3.5.119. Paragraphs 5.5.8 to 5.5.20 of NPS EN-1 recognise the importance of certain civil aerodromes and aviation technical sites, and all military aerodromes, which are officially safeguarded in order to ensure that their safety and operation are not compromised by new development. It notes that new wind energy infrastructure may cause obstructions to MoD low flying and sufficient air training space will

become increasingly important as the number of wind turbines affecting airspace increase. Paragraphs 5.5.21 to 5.5.28 recognise that wind turbines may affect radar systems, and that upgrades to systems may be necessary to maintain or enhance aviation safety.

- 3.5.120. The ExA is satisfied that the Applicant has appropriately undertaken an assessment of potential impacts to aviation and radar on all affected civil and military aerodromes in accordance with paragraph 5.5.49 of NPS EN-1, both in the ES and in additional information submitted to the Examination. The ExA notes that potential effects would be to ATS to Warton and Walney aerodromes (BAE), IoM (Ronaldsway) Airport and Blackpool Airport. There would be potential effects to PSR at St Anne's and Lowther Hill (NATS), Warton (MoD and BAE) and IoM (Ronaldsway) Airport.
- 3.5.121. Whilst the ExA accepts that communications were not scoped into the ES and there is no specific reference to this issue in the NPS, the ExA is also satisfied that the IPs concerns regarding this additional issue have been adequately responded to by the Applicant. Assessments to establish such effects are ongoing, but the draft DCO requirements would secure any mitigation that may be required to address effects on VHF/ UHF communications.
- 3.5.122. The ExA is conscious that the parties should seek to protect the aims and interests of the other parties as far as possible, whilst simultaneously recognising the evolving landscape in terms of the UK's energy security and the need to tackle climate change which necessitates the installation of wind turbines and the need to maintain air safety and national defence in accordance with paragraph 5.5.53 of NPS EN-1. The ExA is satisfied that the relevant parties have been co-operating throughout the pre-application period and during the Examination and continue to work together to identify realistic and pragmatic solutions seeking to protect the aims and interests of the other parties in accordance with the policy, in putting forward a mitigation strategy and seeking to agree requirements.
- 3.5.123. Without mitigation, the ExA concludes that effects to the affected sites would be moderate adverse, which is significant in EIA terms. The final mitigation details remain outstanding following the ongoing assessments and the necessary review of those assessments. There are also commercial agreements outside of the Examination to be finalised. This has necessitated the insertion of requirements to the draft DCO to secure agreement of a mitigation scheme for ATS and/or PSR at each affected site, together with its implementation, and maintenance throughout the lifetime of the development.
- 3.5.124. Draft R4 (St Anne's and Lowther Hill PSR) and R8 (ATS and PSR at IoM Ronaldsway Airport) are agreed between the parties and the ExA does not propose any amendments to these requirements.
- 3.5.125. The ExA acknowledges that draft R5 and R7 relating to ATS at Warton and Walney aerodromes, draft R6 concerning PSR at Warton aerodrome and draft R9 relating to the ATS operations of Blackpool Airport were not agreed by the relevant parties at the close of the Examination. It is understood that the SoS will be provided with an update by the parties pending the completion and review of the relevant assessments.
- 3.5.126. BAE and Blackpool Airport suggested amendments to draft requirements R5, R7 and R9 towards the close of the Examination in relation to the addition of OSPs. The ExA has considered the LoS assessment submitted by the Applicant at D7 and

is satisfied that this demonstrates that the IPs are unjustified in their request, and it is unnecessary to include reference to OSPs in R5, R7 and R9. The ExA understands that aside from the inclusion of OSPs in part (1) of R9, the requirement is otherwise agreed by Blackpool Airport. The ExA therefore proposes no amendments to this requirement in its recommended DCO.

3.5.127. With regard to BAE's other suggested amendments to draft R5, R6 and R7 [\[REP7-018\]](#) the ExA comments as follows:

- *Reference to the relevant mitigation scheme remaining in place not just for the lifetime of the development but including the decommissioning period:* The ExA notes that BAE has not provided evidence to justify the inclusion of decommissioning, and the Applicant made no specific response to this addition during the Examination period. The wind turbine blades would not be turning during decommissioning. The ExA therefore rejects this addition.
- *The need for the undertaker to 'replace and upgrade' as well as maintain the mitigation scheme to resolve any failure:* The ExA notes that BAE has not provided evidence to justify the replace and upgrade of the mitigation scheme and nor has the Applicant responded specifically to this addition during the Examination period. The requirement refers to the need to maintain including without limitation resolving any failure, however so caused. The ExA considers this to be sufficient as drafted and therefore rejects the suggested additional wording.
- *Reference to 'new or different' effects to those identified in the ES:* The ExA notes that BAE wish to delete the words 'materially' new or different effects but has not provided justification for this deletion. The Applicant made no specific response to this addition during the Examination period. The ExA therefore rejects this addition.
- *Reference to the MoD or the Operator (or both) in relation to PSR at Warton:* The ExA considers this to be an acceptable addition to draft R6 (5) (b) and (c), for clarity purposes, and includes the revision in its recommended DCO in [Appendix D](#) of this Report.

3.5.128. The ExA recommends a number of other minor amendments to DCO R7 (ATS at Walney) and R9 (Blackpool Airport) (the amendments are set out in full in Table 11 of [Chapter 6](#) of this Report) as follows:

- R7 (3): replace 'Radar Mitigation Scheme' with 'ATS mitigation scheme'
- R9 (1): delete 'either:' and replace with 'it is satisfied that:'
- R9 (1) (b): Add implementation trigger: 'so implemented prior to construction of any wind turbine generator and thereafter maintained'
- R9 (3): replace 'life' with 'lifetime'.

3.5.129. There is currently a lack of information to satisfy the ExA that the impacts on aviation and radar would not present risks to national security and physical safety. The Applicant's timetable for potential agreement (Appendix A [\[REP7-004\]](#)) indicates that the outstanding matters are capable of being resolved within the SoS decision period. In the event that agreements with BAE are not reached in this time, the ExA is satisfied that the Grampian type requirements in the recommended DCO would meet the relevant tests in securing mitigation and they should provide adequate assurance to the SoS so that consent may be granted in this respect and in accordance with NPS EN-1 paragraph 5.5.60.

3.5.130. Furthermore, a lack of evidence has been provided to the Examination to demonstrate that the criteria within paragraph 5.5.59 of NPS EN-1 would arise after reasonable mitigation and imposition of requirements.

- 3.5.131. Given the uncertainties with the completion of the assessments and the positions on mitigation, the ExA attributes moderate weight against the making of the order in relation to aviation and radar issues. However, in the event that BAE and the DIO are satisfied with the requirements following their review of the assessments and their safeguarding objections are withdrawn, the ExA would reduce this to a little weight against making of the order.

## 3.6. COMMERCIAL FISHERIES

### INTRODUCTION

- 3.6.1. This section considers the potential impacts of the Proposed Development on commercial fisheries.
- 3.6.2. Specific interrelationships of commercial fisheries with other topics are covered in the following sections of this Report:
- Section 3.7, Fish and Shellfish Ecology
  - Section 3.11, Shipping and navigation
  - Section 3.13, Other considerations (including socio-economics)
- 3.6.3. In its consideration of this topic the Examining Authority (ExA) has had regard to the overarching National Policy Statement for Energy (NPS EN-1) taken together with the NPS for Renewable Energy Infrastructure (NPS EN-3). Sections 4.5, 5.3, and 5.4 of NPS EN-1 and paragraphs 2.8.152 to 2.8.164 of NPS EN-3 are specifically pertinent to commercial fisheries.
- 3.6.4. The ExA has also had regard to the North West Inshore and North West Offshore Marine Plan (NWMP) of which policies NW-FISH-2, NW-FISH-3, NW-CE-1 and NW-CO-1 are specifically of relevance to this section of the Report.

### THE APPLICATION

- 3.6.5. Section 2.11 of the Applicant's Planning Statement [\[APP-074\]](#) describes how and where policy requirements in relation to commercial fisheries have been considered by the Applicant in the Environmental Statement (ES).
- 3.6.6. The Non-technical Summary of the ES [\[APP-095\]](#) characterises the baseline commercial fisheries as follows:

*Within the region, landings are dominated by dredge vessels, and shellfish are the most important species group in terms of landed weight and value. Within the Morgan Array Area there are queen scallop grounds, which are of particular importance to dredge vessels from the west coast of Scotland ... Vessels from Ireland and Northern Ireland, deploying pelagic trawls and seine nets that target herring, are active across the commercial fisheries study area.*

- 3.6.7. Information on commercial fisheries within the study area was collected through desk research plus consultation with fisheries groups and site-specific surveys [\[APP-024\]](#).
- 3.6.8. Potential impacts on commercial fisheries were assessed in ES Volume 2, Chapter 6 Commercial fisheries [\[APP-024\]](#) supported by Volume 4, Annex 6.1 Commercial fisheries technical report [\[APP-059\]](#) and an outline Fisheries Liaison and Co-existence Plan (FLCP) [\[APP-065\]](#). The technical report was resubmitted with an



errata table as [\[REP6-040\]](#) and the OFLCP with additional commitments as [\[REP6-068\]](#).

- 3.6.9. Impacts on commercially important fish and shellfish species from direct habitat loss or disturbance, sediment plumes etc were assessed in ES Volume 2, Chapter 3: Fish and shellfish ecology [\[APP-021\]](#), which is covered in section 3.7 of this Report.

### **Mitigation**

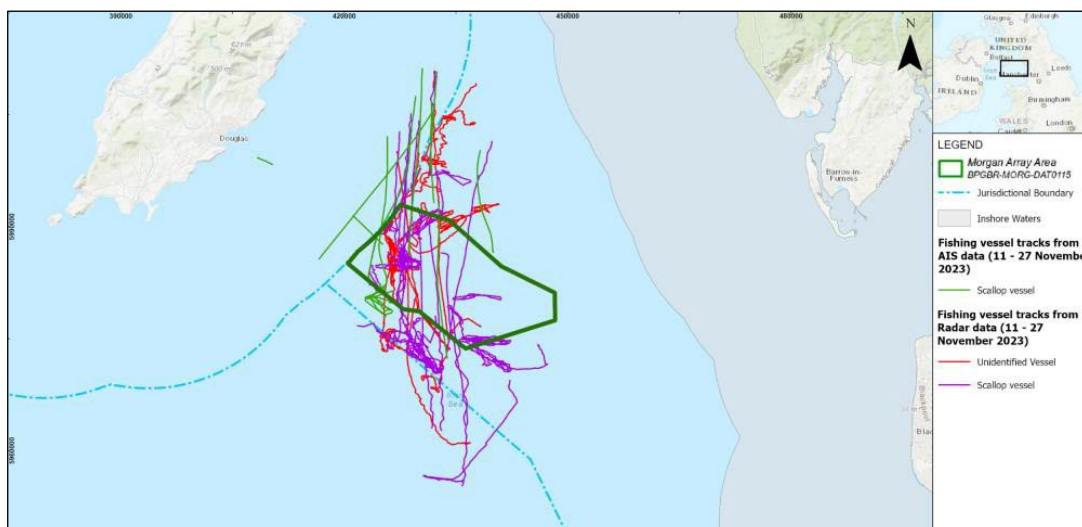
- 3.6.10. As detailed in ES Chapter 6 [\[APP-024\]](#) and the Mitigation and Monitoring Schedule [\[APP-076\]](#) superseded by the Commitments Register [\[REP6-052\]](#), the following commitments to mitigate potential adverse effects arising from impacts of the Proposed Development on commercial fisheries receptors are secured through the draft Development Consent Order (DCO) and the Deemed Marine Licences (DMLs), involving development of and adherence to:

- An Offshore Construction Method Statement (CMS) post-consent with a Cable Specification and Installation Plan (CSIP) including details of cable protection and cable burial monitoring and re-burial procedures (secured by condition in the DMLs of the draft DCO)
- A Design Plan to include infrastructure spacing at a minimum of 1,400 m apart with roughly north to south alignment of wind turbine rows and two lines of orientation, secured via the outline FLCP (Document Reference: J10)
- An Offshore Environmental Plan (EMP), which includes the development of a FCLP in accordance with the outline FLCP which includes implementation of a Scallop Mitigation Zone (SMZ); as-laid coordinates of cable routes submitted to the UK Hydrographic Office (UKHO) and Kingfisher Information Service-Offshore Renewables & Cable Awareness service; and annual reviews for the first five years of operations to identify whether there are any changes to fishing activity
- Use of Notices to Mariners detailing advisory clearance distances (around cable installation vessels) and safety zones around infrastructure during construction and periods of major maintenance secured as a condition in the DMLs of the draft DCO
- An Aids to Navigation Management Plan secured within the DMLs of the draft DCO

### **Impacts on queen scallop fishery**

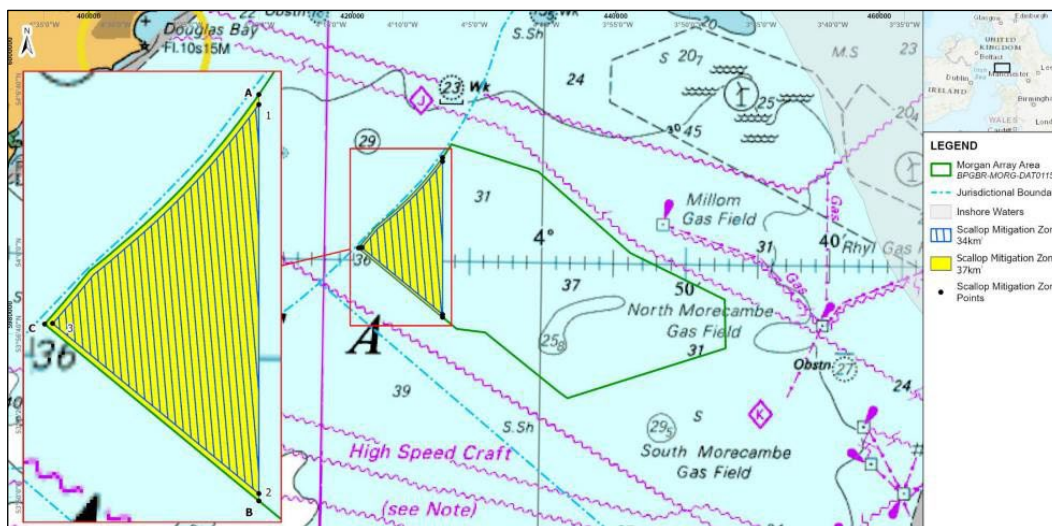
- 3.6.11. An important part of the queen scallop fishing grounds identified in the ES lie within the Proposed Development array area. Figure 9 below shows the scallop fishing vessel tracks from a winter 2023 survey identified from Automatic Identification System and radar data, within the central and western part of the Proposed Development array area [\[APP-024\]](#).

**Figure 9: Winter 2023 survey data of fishing activity within and around the Proposed Development<sup>10</sup>**



- 3.6.12. Having recognised the importance of the fishing ground within the Proposed Development array area for scallop fishers and the potential for project infrastructure to severely restrict fishing the Applicant has committed to the implementation in the Design Plan of a Scallop Mitigation Zone (SMZ) that covers areas of core scallop grounds located within the western section (paragraph 6.8.1.60 [APP-024]). The SMZ is secured through the outline FLCP [APP-065], updated as [REP6-068] secured within the DMLs in the draft DCO. The SMZ is illustrated in yellow hatching in Figure 10 below.

**Figure 10: Scallop Mitigation Zone as developed in the Outline Fisheries Liaison and Co-Existence Plan<sup>11</sup>**



- 3.6.13. Subject to the mitigation for this scallop fishery including the SMZ noted above, ES Chapter 6 [APP-024] reports loss of fishing grounds or displacement of fishing

<sup>10</sup> Source: ES Volume 4, Annex 6.1 Commercial fisheries technical report, Figure 1.65 [APP-059]

<sup>11</sup> Source: Outline fisheries liaison and co-existence plan, Figure 1.3 [REP6-068]

activity during the operations and maintenance phase is assessed to result in a predicted loss of less than 5% of that receptor's annual value of landings.

- 3.6.14. In relation to loss or restricted access to these fishing grounds, the ES Chapter 6 identifies Scottish west coast scallop vessels and Isle of Man (IoM) scallop fishing vessels as receptors of medium sensitivity. The magnitude of impact to these receptor groups in the construction and operations and maintenance phases is assessed as low after mitigation, based on local spatial extent, long term duration, continuous and with low reversibility but would only affect an area from which a very small proportion of ...annual value of landings is caught. Hence the resulting significance of effect to both receptors is assessed as minor adverse in all phases for Scottish west coast vessels and for IoM vessels during construction phase, therefore not significant in EIA terms. The assessment is the same for the decommissioning phase. As this is below the threshold of significance in EIA terms, no additional mitigation measures are proposed by the Applicant.
- 3.6.15. With the exception of potential restricted access or loss of fishing ground for Scottish west coast in all phases and IoM scallop fishing vessels during construction phase as discussed above, the Applicant assessed negligible adverse residual effects for other scallop fishing vessels.

#### **Impacts on pelagic and offshore static gear fisheries**

- 3.6.16. Section 6.8.1 of ES Chapter 6 [\[APP-024\]](#) assesses that the receptor sensitivity is low for herring vessels and offshore static gear vessels and the magnitude of impact would be negligible for the former and low for the latter, therefore the significance of effect of restricted access or loss of fishing grounds is assessed as negligible in both cases.
- 3.6.17. The Applicant assesses that during the operations and maintenance phase of the Proposed Development, there would be no complete exclusions to mobile or static gear fishing vessels, however paragraphs 6.12.1.1 to 6.12.1.4 of ES Chapter 6 note that some pelagic mobile gear vessels may elect not to fish within the Proposed Development array area due to risks associated with spacing of wind turbines or gear snagging.
- 3.6.18. ES Chapter 3: Fish and shellfish ecology [\[APP-021\]](#) reports a potential moderate adverse effect to herring during the spawning period for the Morgan Generation Assets alone and cumulatively with other projects and plans at the Douglas Bank spawning ground off the east and northeast coasts of the IoM, from underwater noise impacts of piling. Fish and shellfish ecology is discussed in section 3.7 of this Report.
- 3.6.19. Overall, ES Chapter 6 [\[APP-024\]](#) concludes that in EIA terms there would be negligible adverse residual effects arising from the Proposed Development in relation to commercial pelagic and static gear fisheries during the construction, operations/maintenance or decommissioning phases and minor adverse for static gear fishing relating to interference, therefore not significant in EIA terms.

#### **Cumulative Effects Assessment**

- 3.6.20. Cumulative effects for commercial fisheries together with other projects are assessed as no higher than for the Proposed Development alone following the implementation of embedded and further mitigation commitments (Table 6.39 [\[APP-024\]](#)).

### **Inter-related effects**

- 3.6.21. Inter-related effects (from different aspects of the Proposed Development on the same receptor) are considered by the Applicant to be no greater than individual effects in isolation, and with specific reference to the fish and shellfish ecology assessment in ES Chapter 3, no significant adverse effects are predicted for any commercial fisheries receptor groups as a result of impacts on commercially important fish and shellfish resources (paragraphs 6.8.6.13 and 6.8.6.16 [\[APP-024\]](#)).
- 3.6.22. Other inter-relationships between commercial fisheries effects and other effects, such as socio-economic and shipping and navigation effects and other sea users were considered in the Inter-related effects Chapter 15 of the ES, and subject to mitigation measures secured by the DCO and DMLs were assessed to not be of greater significance than as separately assessed (Table 15.11 [\[APP-019\]](#)).

### **Transboundary effects**

- 3.6.23. Potential transboundary effects were assessed in relation to impact of the Proposed Development on Irish and Belgian commercial fishing fleets which operate within the commercial fisheries study area. It is predicted by the Applicant that there would be no significant effects on them and displacement into alternative grounds is considered unlikely, based on low level of surveyed activity by these fleets within the Proposed Development array area. Potential transboundary effects for non-UK commercial fishing vessels are therefore concluded to be not significant in EIA terms (section 6.11 [\[APP-024\]](#)).
- 3.6.24. The Applicant's transboundary impacts screening report [\[APP-032\]](#) clarifies that:
- ...the Isle of Man is a Crown Dependency of the UK and not a European Economic Area (EEA) State. Therefore, Regulation 32 of the EIA Regulations does not apply to the Isle of Man. For this reason, it is not considered to be a transboundary consultee for the Morgan Generation Assets. As such, potential impacts upon environmental receptors within the Isle of Man are not considered to be transboundary. Potential impacts upon environmental receptors within the Isle of Man are fully considered in the Environmental Statement (paragraph 1.1.1.5).*

### **ISSUES CONSIDERED DURING THE EXAMINATION**

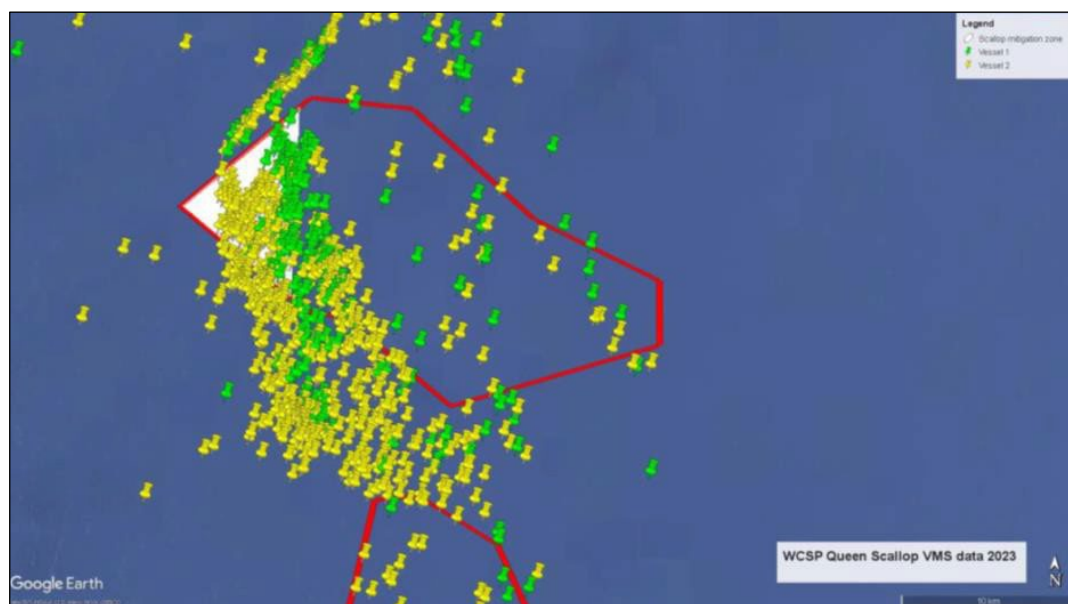
- 3.6.25. The examination of commercial fisheries issues focused on the following sub-topics, discussed below:
- Restricted access or potential loss of queen scallop fishing grounds
  - Potential ecological impacts to queen scallop fishery
  - Restricted access or potential loss of pelagic fishing ground
  - Potential for co-existence of aquaculture
- 3.6.26. Potential impact on fish and shellfish ecology is covered in section 3.7 of this Chapter of this Report.
- 3.6.27. The IoM government's Local Impact Report (LIR) included concerns about impacts of the Proposed Development alone and cumulatively with multiple other offshore wind farm (OWF) developments resulting in adverse effects to the island's fisheries and fish stocks citing particular concerns about impacts on spawning and nursery areas and potential displacement of commercial fishing activity (sections 2.2 and 2.10 [\[REP1-047\]](#)).

- 3.6.28. In addition to the LIR from the IoM TSC, representations were made by fishing organisations from England, Scotland, Wales, Northern Ireland, and Ireland concerning scallop dredge fishery and pelagic trawl fishing, primarily for herring.
- 3.6.29. No representations were received into the Examination concerning static gear fisheries or fishing.

#### **Restricted access to or loss of queen scallop fishing grounds**

- 3.6.30. West Coast Sea Products (WCSP), a member of the Scottish Fishermen's Federation (SFF) made a strong objection to the Proposed Development, arguing that the adverse effects of loss of or restricted access to fishing grounds and interference with or displacement of fishing activity should be rated as of moderate to major significance after proposed mitigation (rather than the minor adverse significance after mitigation as assessed by the Applicant) [REP1-065].
- 3.6.31. WCSP made the case that the fishery in the eastern Irish Sea is one of 4 global Queen Scallop commercial fisheries, therefore Morgan OWF raises significant socioeconomic and market implications especially if considered in tandem with the Mona OWF proposal (item 1, Summary [REP1-065]).
- 3.6.32. A Vessel Monitoring System (VMS) geo-positioning data plot of two queen scallop dredge fishing vessels submitted by SFF together with WCSP [REP1-065] shows the distribution of activity in 2023 within the Proposed Development array area (see Figure 11 below).

**Figure 11: Location plots (VMS data) of two WCSP vessels engaged in queen scallop fishing through 2023<sup>12</sup>**



- 3.6.33. WCSP claimed that as well as obstruction to dredge fishing from turbine structures, shallow burial depth for cables running around and across the proposed SMZ would inevitably lead to cable exposure and heightened risk of fishing gear snagging,

<sup>12</sup> Source: West Coast Sea Products written representation [REP1-065]



preventing a return to fishing in that sea space during and after construction [\[REP1-065\]](#).

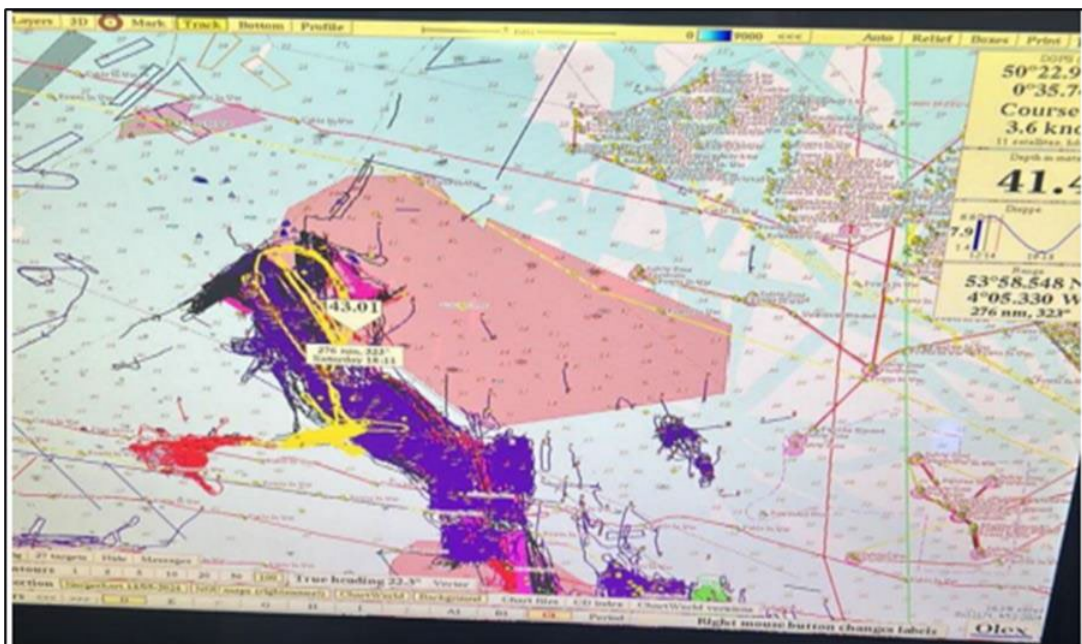
- 3.6.34. The Applicant's comprehensive response to the ExA's first written question (ExQ1) CF1.8 [\[REP3-006\]](#) explained the impracticality of constraining inter-array cable routing to the boundary of the SMZ as it would result in the inability to avoid large sand waves, and cables confined to boundary only would result in additional need for protection to a greater number of cable crossings.
- 3.6.35. The Applicant also reaffirmed the various commitments made with regard to cable burial status monitoring, which would be included in the Offshore CMS; the revised outline FLCP included commitments to ensuring that fisheries stakeholders would be made aware of any increased risk in specific locations (page 45 [\[REP3-004\]](#)).
- 3.6.36. WCSP continued throughout the Examination to lack confidence that burial of cables would be maintained without gear snagging risk from imported protection, particularly at the perimeter of the SMZ, and to support this concern SFF sought a commitment to greater depth of cable burial. At Issue Specific Hearing (ISH) 2 the ExA questioned the degree of inconvenience to fishing should dredge gear have to be lifted to avoid charted cable protection and WCSP responded that it would be "slightly inconvenient", but fishermen are well used to such a procedure [\[EV4-008\]](#).
- 3.6.37. WCSP also explained that the type of dredge gear that they deploy can penetrate some 20 to 30 cm below the seabed therefore risks snagging on cables that have depleted cover due to marine physical processes changing the contouring of the seabed over time. The IoM scallop fishing boats use a different type of dredge gear which is less penetrating of the seabed. WCSP stated that it would not be a reasonable adjustment for its fishers to change vessel and gear type to the same as the IoM vessels [\[EV4-008\]](#).
- 3.6.38. WCSP subsequently confirmed in response to ExQ1 CF1.2 [\[REP4-052\]](#) that if good information is available about cables present within the SMZ then skippers of vessels can lift and deploy fishing gear to avoid cables and also confirmed that during peak scallop fishing season there are usually 1 or 2 scallop vessels operating simultaneously within or close to the Proposed Development array area.
- 3.6.39. In extensive answers to submissions by SFF and WCSP, the Applicant emphasised its commitment to making available as early as possible accurate charted information on the location of cables and any cable protection or reburial (pages 18-19 [\[REP5-016\]](#)).
- 3.6.40. The ExA's second written question (ExQ2) CF2.3 asked SFF and WCSP to confirm whether they were satisfied with additional cable installation and protection commitments made by the Applicant at Deadline (D) 4. Their answer [\[REP5-087\]](#) was negative and they did not consider that the SMZ would be effective mitigation for restricted access or loss of fishing ground.
- 3.6.41. At ISH3 WCSP confirmed that there are existing gear snagging hazards ('fasteners') within the scallop fishing grounds, including subsea mounds and the wreck of the 'Peveril' adjacent to the south-western edge of the proposed SMZ, and that fishing vessels currently either avoid those existing charted hazards, or lift their gear to pass over them and then "*re-shoot*" the gear [\[EV6-007\]](#).
- 3.6.42. At D6 the Applicant confirmed its statement made at ISH3 [\[REP6-012\]](#) that it commits to produce a cable specification and installation plan that minimises as far



as reasonably possible any cable crossings or cable protection around the perimeter of and across the proposed SMZ, noting that it is in mutual best interests to assure continued sufficient cable burial.

- 3.6.43. WCSP claimed likely adverse socio-economic impact to 30 fishermen and 100 onshore processing employees in the queen scallop fishery as a consequence of loss of fishing grounds, maintaining that about 15% of its existing fishing grounds are situated within the Proposed Development alone and over 50% cumulatively within the combined array areas of the Proposed Development and the proposed Mona OWF [REP1-065].
- 3.6.44. SFF confirmed its objection to the magnitude of adverse effect assessed by the Applicant for Queen Scallop fishing during the construction phase and concluded in response to ExQ1 CF1.5(c) [REP4-050] its view that the 10% reduction in a fishing business landing/ revenue is massive and the magnitude on the receptor should therefore be escalated for the construction phase from low to medium.
- 3.6.45. This fishing activity was shown by SFF in a screenshot image in response to ExQ1 CF 1.4 [REP4-050] and is reproduced below in Figure 12. The figure shows recorded scallop fishing tracks from three WCSP vessels within and adjacent to the proposed array boundary of the Proposed Development. The Applicant subsequently confirmed that this data is consistent with the assessment presented in the ES [REP5-016].

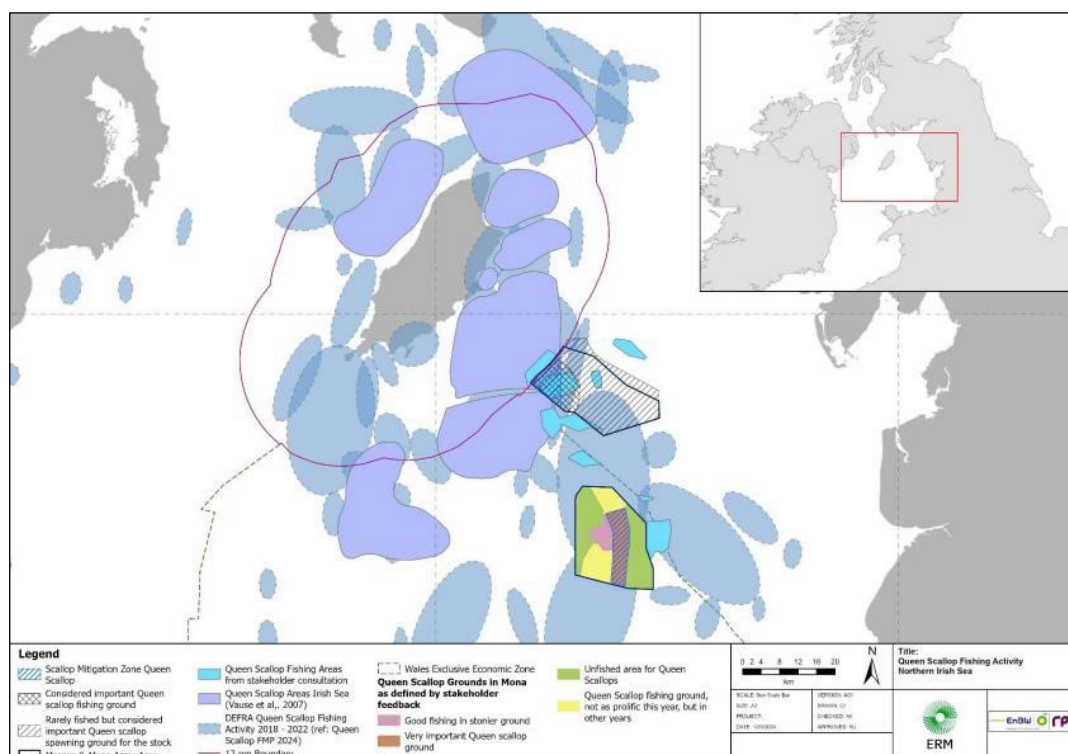
**Figure 12: BA4 2015-2021\_Queen Scallop fishing Morgan - WCSP screen-shot data plot<sup>13</sup>**



- 3.6.46. The Applicant submitted at D4 [REP4-011] a map study by the consultancy ERM of queen scallop fishing grounds in the east and north Irish Sea identified from stakeholder feedback, see Figure 13 below.

<sup>13</sup> Source: Figure 4 from West Coast Sea Products submission [REP4-050]. (Note: the image is a screenshot from a data plotter and is distorted in the submission.)

**Figure 13: Irish Sea queen scallop fishing grounds identified from evidence gathered by ERM<sup>14</sup>**



3.6.47. ExQ2 CF2.5 [PD-009] asked SFF and WCSP to comment on this geographic study of scallop fishing grounds submitted by the Applicant at D4. They responded that their members do not have access to fishing grounds in IoM waters and that the majority of other queen scallop grounds shown on that study are not “commercially viable during a typical season ... some beds can go years without any productivity” [REP5-087].

3.6.48. SFF and WCSP also submitted as Annex 1 to their response to ExQ2 a 2024 ‘Evidence Statement’ for a proposed Fisheries Management Plan (FMP) for queen scallop in English waters on which DEFRA has been consulting [REP5-086].

3.6.49. ExQ2 CF2.1 sought clarification on potential compensation as a last resort for adverse effects to fisheries. The Applicant provided an extensive answer in two parts, first on potential compensation if queen scallop stocks remain healthy and viable for commercial fishing; and second on a management mechanism if post construction monitoring were to reveal a greater than expected negative effect on scallop stocks [REP5-013]. The Applicant confirmed its awareness of live consultation on the DEFRA proposed FMP (Annex 5.3, paragraph 1.2.1.18 [REP5-013]) and noted that some of the measures proposed in that consultation such as introducing controls on fishing gear specification could themselves lead to reductions in scallop landings due to new management measures, noting that any post-construction monitoring of the impact of the Proposed Development on scallop stocks would need to be placed in the context of these potential new measures, which adds further complexity to the process.

<sup>14</sup> Source: Annex 6.2 to the Applicant’s response to Written Representations from MMO at Deadline 3: Queen Scallop [REP4-011]

- 3.6.50. In its response to ExQ2 CF.1.5 the IoM TSC agreed with the concerns expressed by the SFF about the proposed SMZ and asked that the Applicant's commitments to pre-and post-construction monitoring should be strengthened [\[REP3-033\]](#).
- 3.6.51. To satisfy that representation at D3 from the IoM TSC the Applicant enhanced the In-Principle Monitoring Plan (IPMP) with proposals for post-construction monitoring and adaptive management of queen scallop stocks and fishing, and the Applicant confirmed that this monitoring programme would be developed post-consent with the MMO and stakeholders through the FLCP as secured by the draft DCO and that it would include king scallop as well as queen scallop and align with other regional monitoring programmes [\[REP5-042\]](#).
- 3.6.52. The Northern Ireland Fish Producers' Organisation (NIFPO) asked at ISH3 if the data collected from monitoring and adaptive management would be publicly shared and the Applicant confirmed [\[REP6-012\]](#) that it would be sharing gathered data with stakeholders and scientific organisations, aligned with the intention of the regional approach to monitoring.
- 3.6.53. The final statement of common ground (SoCG) with the National Federation of Fishermen's Organizations (NFFO), the Welsh Fishermen's Association (WFA) and the Whitehaven Fishermen's Co-operative acknowledged that the assumption of return to scallop fishing with mobile gear within the Proposed Development array area at pre-construction levels is based on limited evidence and a caveat is applied to the potential effectiveness of the SMZ and remains to be demonstrated by monitoring (see NFFO.EIA.7 [\[REP5-087\]](#)).
- 3.6.54. The final SoCG with the IoM TSC agreed the additional monitoring proposals in the update Outline FLCP and IPMP subject to the inclusion of consideration of king scallop, which the ExA notes was actioned by the Applicant by the close of the Examination (see TSC.CF.10, TSC.CF.11 and TSC.CF.13 [\[REP6-079\]](#)).
- 3.6.55. At D6 the Applicant further clarified its commitments to optimise the SMZ boundary configuration and cable burial as far as reasonably practicable and justified its confidence that scallop dredging could continue post-construction, at least within the SMZ [\[REP6-004\]](#).
- 3.6.56. The final SoCG with the MMO confirms agreement with the SMZ secured through the FLCP which would be enforced by the MMO, but the MMO would not be involved in any arbitration regarding compensation (see MMO.MP.15 [\[REP6-081\]](#)). Otherwise, the MMO defers to the NFFO and other standalone organisations on commercial fisheries matters.
- 3.6.57. In a final joint submission with WCSP, SFF maintained their objections to the Proposed Development and they submitted that there is a need for clarification about the mechanism that would be in place for commercial compensation to fisheries stakeholders as a last resort in the worst-case event that the SMZ were shown by monitoring to be not fully effective as mitigation for loss or reduced access to fishing grounds [\[REP6-103\]](#).
- 3.6.58. SFF refuted the Applicant's statement that compensation under guidance from the Fishing Liaison with Offshore Wind and Wet Renewables Group (FLOWW) led by The Crown Estate has historically been limited to static gear fisheries and noted that in fact there is also precedent for compensation agreements with mobile gear fishers [\[REP6-103\]](#).

- 3.6.59. The SFF also refuted that any catch reductions resulting from the forthcoming DEFRA FMP would be of a similar order to losses due to reduced access to fishing ground and confirmed its view that a scallop re-seeding programme suggested by the Applicant as potential adaptive management would be ineffective.
- 3.6.60. Nonetheless, the final SoCG signed jointly by the Anglo-North Irish Fish Producers' Organisation (ANIFPO) and SFF representing WCSP, the Scottish Pelagic Fishermen's Association (SPFA) and the Scottish Whitefish Producers Association (SWFPA) agreed that the outline FLCP had been suitably amended to include development and implementation of a monitoring programme to be secured in the final offshore monitoring plan to be agreed with the MMO, to include pre- and post-construction monitoring for up to five years post-construction of both queen scallop and king scallop in and around the Proposed Development. The Applicant/undertaker would report annually, and that if the effect of development on queen scallop should be found to be significantly worse than predicted in the ES, the Applicant/undertaker would engage with stakeholders on an adaptive management measure and next steps to be taken (see CF.OFLCP.T17 [\[REP6-084\]](#)).
- 3.6.61. The final joint SoCG with SFF and the other IPs noted above also agreed a final position that the Applicant would investigate if and when collected fish survey data (in relation to the Underwater Sound Management Strategy and herring spawning and nursery sensitivities) could be shared with stakeholders (see CF.EIA.3 [\[REP6-084\]](#)) but the following issues of impact assessment and mitigation remained in dispute:
- The IPs still consider that multiple fisheries impacts have been under-assessed by the Applicant for project alone and cumulatively.
  - Mitigation by SMZ would be inadequate if turbine structures are located on the perimeter and cables laid within the SMZ.
- 3.6.62. The ANIFPO submitted a rider to its agreement with the SoCG point CF.EIA.3 arguing for the sharing of data collected for whatever purpose as a “*meaningful precedent ... for offshore developments*” as an “*opportunity to further our understanding of the fish stocks that we manage*” [\[REP6-089\]](#).
- 3.6.63. The ANIFPO also made a final submission separate to its joint SoCG with SFF, which elaborated that it could not agree to the SMZ as a mitigation measure if cables are situated within it (see CF.EIA.7 and CF.OFCLP.P6 [\[REP6-089\]](#)).
- 3.6.64. In its closing statement [\[REP6-014\]](#) the Applicant maintained a high level of confidence that proposed mitigation and coexistence measures would be successful.
- 3.6.65. The Applicant also expanded at D6 its contextual evidence on the totality of queen scallop fishing grounds in the region as assessed by DEFRA in its 2024 FMP consultation document for queen scallop (referred to above), noting that, whilst recognising the importance of the western part of the Proposed Development sea space for queen scallop fishing, the DEFRA work indicates that queen scallop fishing accounts for only 20-40% of annual revenue for the small number of vessels engaged in this region, justifying the assessment conclusion reached in the Applicant's ES [\[REP6-004\]](#).
- 3.6.66. The Applicant maintained its position that no further mitigation or compensation was considered necessary or appropriate arguing that “*FLOWW guidance sets out that compensation payments should only be used as a last resort where there is a*



*residual significant effect...*” and that “*the mitigation measures committed to by the Applicant would remove the potential for significant effects on any commercial fisheries interest*” [\[REP6-014\]](#).

- 3.6.67. Finally, in response to a Rule 17 question about potential compensation the Applicant held firm that it did not consider it necessary or appropriate to make detailed provision for an outcome that is not anticipated to occur or that could be solely attributable to the Proposed Development [\[REP7-004\]](#).

***ExA considerations on restricted access to or loss of queen scallop grounds***

- 3.6.68. The ExA recognises that NPS EN-3 paragraph 2.8.319 states that the SoS should consider the extent to which the Proposed Development occupies any recognised important fishing grounds, and whether the project would prevent or significantly impede protection of sustainable fisheries or fishing activities. It also states in paragraph 2.8.320 that if the SoS considers the wind farm would significantly impede such fishing activity, this should be attributed a correspondingly significant weight.
- 3.6.69. The ExA notes that the Applicant assessed the receptor sensitivity of the Scottish west coast scallop vessels as medium and the magnitude of loss or restricted access to fishing grounds as low, resulting in an assessment of minor adverse significance of effect.
- 3.6.70. The ExA also notes the vigorous objections of WCSP and the SFF to the Applicant’s assessment of adverse effect to the queen scallop fishery, and the contention that the mitigation proposed by the Applicant, mainly the SMZ, would not be sufficiently effective to reduce that residual adverse effect to minor adverse, claiming that instead it should be rated as moderate adverse and therefore significant.
- 3.6.71. Although no explanatory note or key to the colours of different vessel tracks in the figure submitted with [\[REP4-050\]](#) (see Figure 12 above) was provided by either SFF or WCSP, the ExA notes the extent of scallop fishing outside as well as inside the boundary of the proposed OWF array and SMZ, and understands from oral evidence from WCSP at ISH2 that the distribution of fishing illustrated is a reasonably typical pattern, and that the best fishing ground is found in different locations from year to year.
- 3.6.72. After mitigation, the ExA notes that loss of fishing grounds or displacement of fishing activity during the operations and maintenance phase is assessed by the Applicant to result in a predicted loss of less than 5% of that receptor’s annual value of landings (paragraphs 6.8.2.47 and 6.8.2.48 [\[APP-024\]](#)). However, the ExA is mindful of the fact that WCSP maintained that about 15% of its existing fishing grounds are situated within the Proposed Development alone and over 50% cumulatively within the combined array areas of the Proposed Development and the proposed Mona OWF [\[REP1-065\]](#).
- 3.6.73. Although there was solid evidence submitted that fishers could lift their gear to avoid known seabed hazards and ‘fasteners’ within the SMZ, and although the Applicant has made commitments secured by the DMLs to a minimum cable burial depth and to provide rapid response and information to fishers if cables should become exposed, the ExA is conscious that there is potential for cables initially buried at the minimum design depth of 0.5m to have reduced cover over time due to physical processes and thereby become a snagging hazard for penetrative dredge gear.

- 3.6.74. The ExA also accepts WCSP's evidence that it would not be a reasonable adjustment for the Scottish west coast scallop fishers to change vessels and fishing gear type to reduce the snagging risk.
- 3.6.75. The ExA accepts WCSP's evidence on the relative importance of the queen scallop fishery in the eastern Irish Sea with its most productive fishing grounds overlapping with the Proposed Development. However, the ExA considers that there was insufficient evidence submitted to conclude that the future viability of scallop dredging as an existing activity would necessarily be permanently harmed. The ExA also considers that even if the IP concerns about ability to return to scallop fishing at pre-construction levels are subsequently found to be justified, there would be opportunities for continuation of scallop fishing activity within the region on other scallop grounds, especially given that WCSP fishes for king scallop as well as queen scallop in the eastern Irish Sea.
- 3.6.76. The ExA also notes that the scale of adverse effect of restricted access to or loss of fishing ground is only contested by WCSP as the affected scallop fishing company together with the SFF as the trade organisation to which it belongs. The ExA comments that evidence submitted shows typically two vessels fishing seasonally only partially within the Proposed Development array area, and that whilst likely to be partially restricted by the presence of perimeter turbines and risk of buried cables having reduced depth of cover over time, fishing within the SMZ could continue.
- 3.6.77. Nonetheless, the ExA considers that the arguments of WCSP have merit regarding the limitations of effectiveness of the SMZ on account of concerns over potential for gear snagging on cable protection or cables with reduced burial depth, and consequently considers that the residual adverse effect of potential restricted access or loss of fishing ground for the Scottish west coast scallop vessels should be regarded as having a moderate adverse significance of effect for the project alone and cumulatively with the proposed Mona OWF.
- 3.6.78. Regarding potential safety effects on fishing activity, the ExA considers that the SoS can be satisfied that safety can be managed as discussed above by displacement of activity or lifting of trawl gear when in the vicinity of structures and charted subsea cables, and by undertaker commitments to remedial action for any cable exposure or shallow burial by the undertaker comprised within monitoring, co-existence, liaison and management plans secured in the recommended DCO.
- 3.6.79. Cable protection and cable crossings are discussed in more detail in section 3.10 of this Report.
- 3.6.80. The ExA notes that in relation to a new proposed FMP for queen scallop in English waters on which DEFRA has been consulting, the Applicant pointed out that some of the measures proposed in that consultation (such as introducing controls on fishing gear specification) could themselves lead to reductions in scallop landings, and that any post-construction monitoring of the impact of the Proposed Development on scallop stocks would need to be placed in the context of these potential new measures, which adds further complexity to the process (Annex 5.3, paragraph 1.2.1.18 [\[REP5-013\]](#)).
- 3.6.81. The ExA notes that the Northern Ireland Fishermen's Federation (NIFF) joined with SFF and other fisheries stakeholders as an IP, but it does not appear to be a signatory on the final version of the joint SoCG [\[REP6-084\]](#). The ExA considers that does not have bearing on the weight to be applied in this ExA recommendation



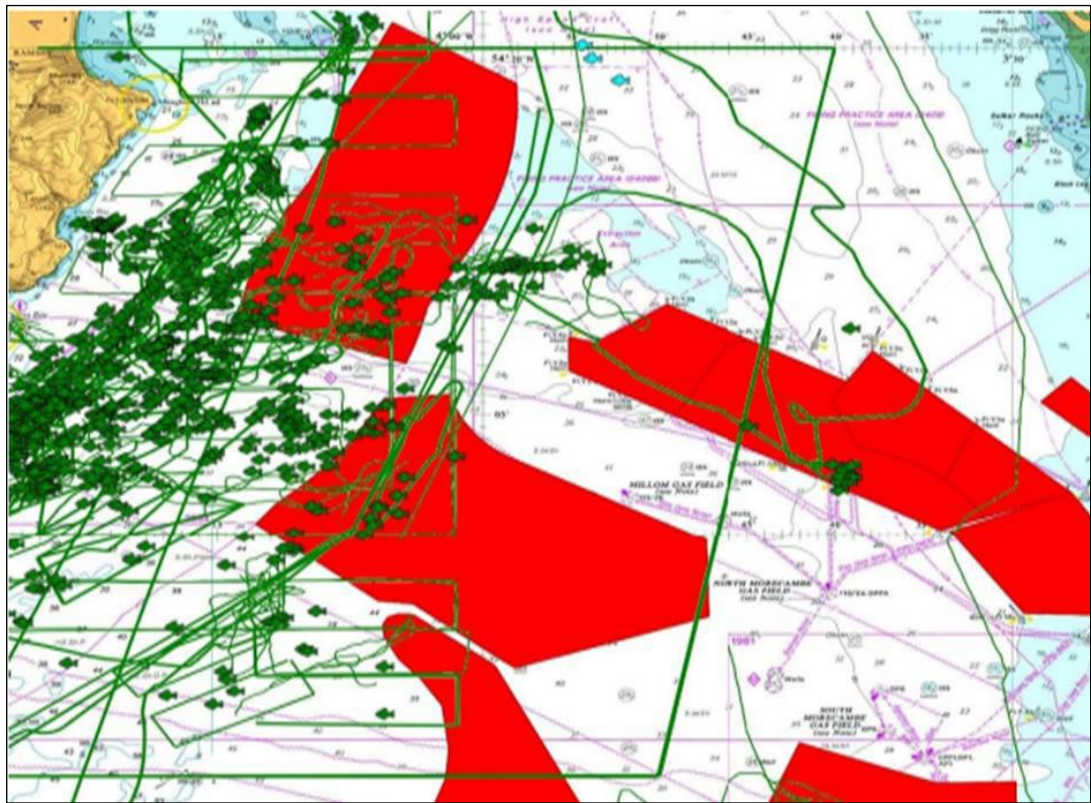
because NIFF comments are entered against several points in that SoCG and it was recorded as present at final discussions on 7 February 2025.

- 3.6.82. The ExA considers that due attention to potential ecological impacts on queen scallop habitat, breeding and spat development has been given in the ES and this is discussed in section 3.7 of this Report.

**Restricted access, displacement or potential loss of pelagic fishing ground**

- 3.6.83. The NFFO & WFA made a joint representation noting concerns about cumulative “*spatial squeeze*” on fishing activities from offshore wind developments, resulting in economic harm to fisheries through loss of earnings from catch landings and increased operating costs from “*increased steaming time*” to more distant fishing grounds [\[RR-024\]](#).
- 3.6.84. NFFO/WFA noted in particular that:
- We feel that the assumption of no displacement effects observed during construction for all the different fishing gear sectors is vastly underestimated, assessed as negligible on all occasions. The only justification for this seems to be they can disperse into other areas. This is not the case, especially in areas such as this [\[RR-024\]](#)*
- 3.6.85. In ISH2 SFF expressed concerns about the ability of pelagic fishing to continue within the array area, primarily in the western corner of the array [\[EV4-008\]](#). SFF subsequently provided an illustrated argument in response to ExQ1 CF1.3 as to why pelagic fishing with different types of net could not easily co-exist within an OWF even with 1400m turbine spacing, primarily because of the need to chase a shoal of fish while deploying a trawl net around 200 metres wide [\[REP4-050\]](#).
- 3.6.86. SFF also submitted evidence of pelagic fishing between the Proposed Development and the IoM 1994 to 2023 in response to ExQ1 CF1.5, shown in Figure 14 below, proposing that the magnitude of impact on pelagic fishing should be raised from negligible to high [\[REP4-050\]](#).

**Figure 14: Pelagic fishing plotter data 1994 to 2023<sup>15</sup>**



- 3.6.87. The Applicant maintained its disagreement with SFF's view that fishers would not be able to continue to carry out pelagic trawling within the proposed array area and referred back to its earlier detailed answer in (answer to item REP1-059.14 [\[REP2-005\]](#)).
- 3.6.88. The Applicant also confirmed that "*all available data*" indicates that no substantial pelagic fishery overlaps with the Proposed Development array area, and that the vast majority of herring fishing activity takes place outside the Proposed Development array area [\[REP5-016\]](#).
- 3.6.89. The final SoCG with NFFO, WFA and Whitehaven Fishermen's Co-operative acknowledged that the assumption of return to fishing with mobile gear within the Proposed Development array area at pre-construction levels is based on limited evidence and remains to be demonstrated by monitoring (see NFFO.EIA.6c [\[REP5-053\]](#)).
- 3.6.90. The combined SoCG with SFF, WCSP, SPFA and ANIFPO contains no specific reference to pelagic trawl fishing [\[REP6-084\]](#), but SFF's closing submission (section (i) paragraph 4) maintained that pelagic fishing would not be possible in the SMZ if perimeter turbines are present [\[REP6-103\]](#).
- 3.6.91. NIFPO declined to sign a SoCG but submitted a combined closing statement and post-hearing note at D6 [\[REP6-097\]](#) which is predominantly a generic submission

<sup>15</sup> Source: Responses to ExQ1 submitted by Scottish Fishermen's Federation and West Coast Sea Products Ltd., Action Point 17 [\[REP4-050\]](#) (Note: no key provided and figure distorted in the original REP4-050 submission.)

concerning effects to fish and shellfish and their habitat from several OWF developments in the region.

- 3.6.92. The Applicant re-affirmed its confidence, with reasoning, that pelagic trawling could continue post-construction within the Proposed Development, particularly within the SMZ (section 19.1.2 [\[REP6-004\]](#)).

***ExA considerations on restricted access, displacement or potential loss of pelagic fishing grounds***

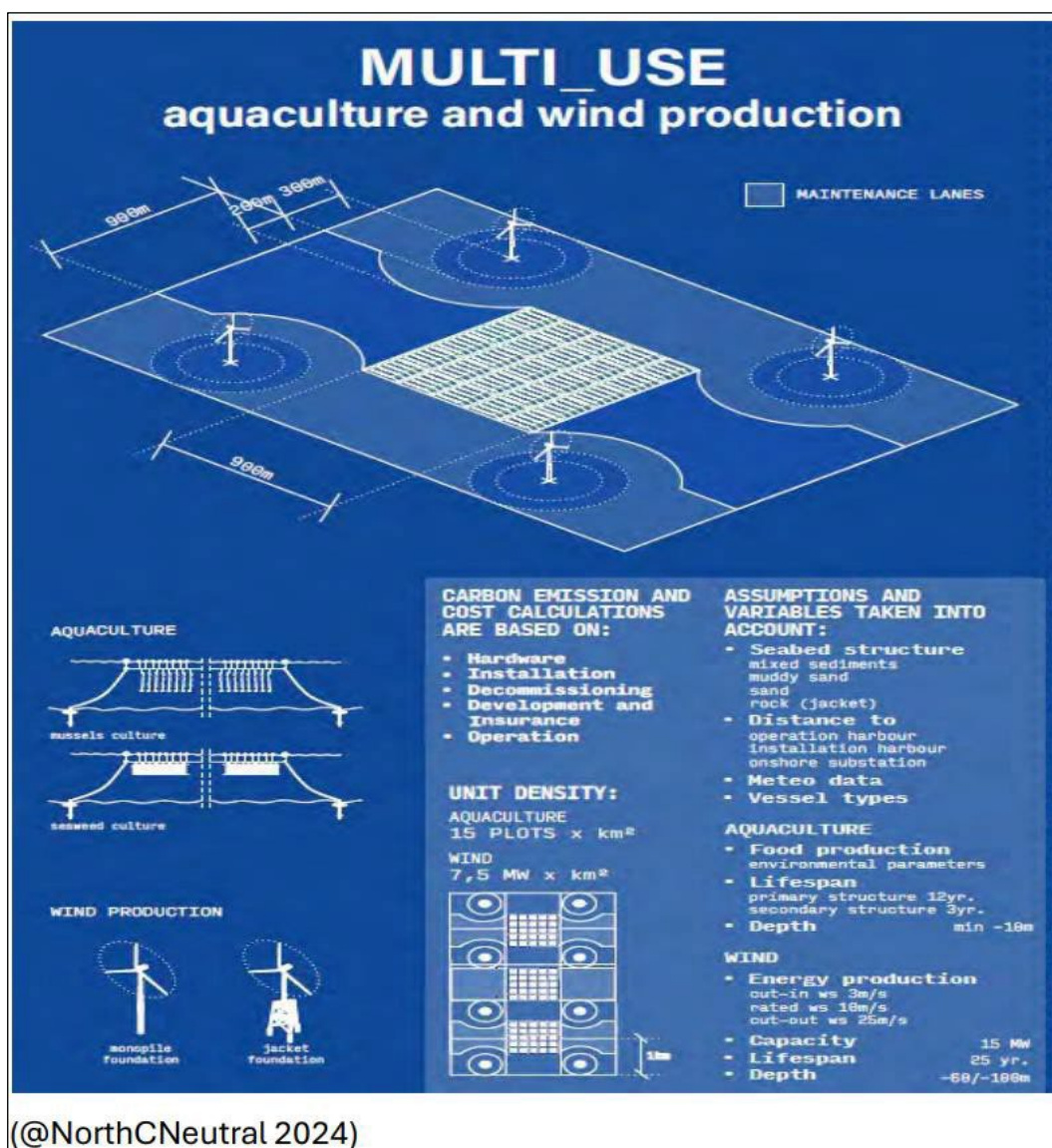
- 3.6.93. The ExA notes that the screenshot image submitted by SFF as evidence of pelagic fishing between 1994 and 2023 [\[REP4-050\]](#) (reproduced above) appears to show fishing vessel movement tracks predominantly outside the footprint of the Proposed Development.
- 3.6.94. On the basis of evidence made available in the Application and the Examination, the ExA accepts the Applicant's assessment of negligible adverse residual effects arising from impacts of the Proposed Development on commercial pelagic fishing activities.
- 3.6.95. Fish ecology considerations are discussed in section 3.7 of this Report.

**Potential for co-existence of aquaculture**

- 3.6.96. At a late stage of the Examination (after D4) Bodorgan Marine Limited (BML) requested to become an Interested Party. The ExA declined, because no relevant representation had been received at the due time and the request fails the tests of the Infrastructure Planning (Examination Procedure) Rules 2010 with reference to Planning Act 2008 s102. However, the ExA exercised its discretion under Rule 10(3) to accept into the Examination at D5 a representation from BML and subsequently to permit them to speak at ISH3 under Rule 14(10).
- 3.6.97. In its D5 submission [\[REP5-093\]](#) BML described itself as a company established in 2022 to pursue commercial marine opportunities with a partnership interest in mussel farming. BML argued that the Applicant has failed to consider the potential for coexistence of the Proposed Development with future aquaculture development, specifically mussel farming and claimed that the Applicant has failed in addressing NPS EN-3, citing paragraphs 2.4.48 and 2.8.51.
- 3.6.98. BML's submission [\[REP5-093\]](#) references the Centre for Environment, Fisheries and Aquaculture Science (Cefas) study 'Identification of areas of aquaculture potential in English waters (MMO 1184)' which was published in 2020. BML explained that it has ambitions to co-locate an offshore mussel farm to be developed with a commercial partner "*on part of the seabed and in the water column within the Order Limits of the Morgan OWF*", arguing that as a matter of national policy opportunities for co-existence and co-location must not just be taken but 'maximised'.
- 3.6.99. A schematic illustration from BML's submission [\[REP5-093\]](#) entitled 'Multi-Use aquaculture and wind production' was displayed and discussed at ISH3 (see Figure 15 below). The ExA asked BML clarifying questions about how the longline suspended rope aquaculture arrays (each of 50ha extent) that it seeks to promote within the Proposed Development array area could be compatible with coexistent pelagic fishing activity, small craft navigational safety and maritime search and rescue.



Figure 15: 'Multi-Use aquaculture and wind production' schematic diagram submitted by Bodorgan Marine Limited<sup>16</sup>



- 3.6.100. BML clarified at ISH3 that (although not to scale) this image indicates an aquaculture array of approximately 50 hectares and their concept would occupy only a small percentage of the overall OWF array area. However, he was unable to answer the other questions put to him by the ExA and deferred to BML's technical partner, DeepDock Limited, to answer in writing at D6 [EV6-009].
- 3.6.101. SFF and NIFPO representatives commented at ISH3 that they could not envisage how such a concept as illustrated could coexist with commercial fishing with mobile gear and would present a major hazard to navigation for fishing vessels and high-speed wind farm service vessels [EV6-009].
- 3.6.102. The Applicant also submitted at ISH3 that the BML claims were not reasonable, feasible or backed by any assessment of impact and confirmed that the outline FLCP as drafted does not preclude future engagement with aquaculture interests

<sup>16</sup> Source: Deadline 5 submission, accepted at the discretion of the ExA, from Bodorgan Marine Limited section 7 in [REP5-093]

[EV6-009] and subsequently refuted BML's arguments for co-existence policy support and subleasing considerations [REP6-004].

3.6.103. BML made a lengthy final submission [REP6-107] of which only Part 1 (the first 5 pages) was a response to questions put to BML at ISH3. For reasons of fairness to other parties in the Examination and having clearly stated at ISH3 that it may be unacceptable to receive new evidence at D6 so close to the end of the Examination, the ExA declined to accept Parts 2 and 3 and the annexes of the BML D6 submission. There was insufficient time remaining in the Examination to allow the Applicant or any IPs a fair opportunity to respond.

3.6.104. Helpfully, the Crown Estate submitted into the Examination at D6 a clarification note on a key point of law, confirming that the Energy Act 2004 provides powers to the Crown Estate to grant leases to exploit energy resources in the EEZ outside English territorial waters, but such powers do not extend to granting leases for aquaculture [REP6-102].

***ExA considerations on potential for co-existence of aquaculture***

3.6.105. The ExA considers that BML had been given a fair opportunity to have its representation examined and has given it due consideration despite its late appearance in the Examination.

3.6.106. The ExA acknowledges that BML's submission [REP5-093] references the Cefas 2020 study identifying areas of aquaculture potential in English waters, but the ExA notes that whilst that report considers the potential importance to the UK of mussel aquaculture, it references at the outset regulatory barriers to growth and concludes that more marine spatial planning work is needed to take account of other marine activities in order to identify the most suitable locations for aquaculture.

3.6.107. The ExA notes that NPS EN-3 paragraph 2.8.158 states that:

*[a]pplicants will be expected to undertake dialogue with the fishing industry during the planning and design of individual offshore wind farm and transmission proposals to maximise the potential for co-existence/co-location and reduce potential displacement."*

The ExA also notes that the 2011 MPS notes that administrations support and encourage the development of sustainable aquaculture industries subject to suitable governance and safeguards (MPS paragraph 3.3.1) and that authorities "*should seek to embrace opportunities for coexistence of aquaculture and other marine activities in developing marine plans*". It is also noted that account should be taken of the financial and environmental impact that new aquaculture operations might have on existing marine activities (MPS paragraphs 3.9.6 and 3.9.7).

3.6.108. NWMP policy NW-AQ-1 is supportive of aquaculture production in strategic areas and the ExA notes that all areas where this policy applies can be viewed in Figure 5 of the Technical Annex to the NWMP. However, the ExA notes that Figure 5 does not show any such strategic areas for the development of aquaculture production in or adjacent to the sea space of the Proposed Development; in fact, all are located in inshore waters within the 12 nm territorial sea limits. The ExA also notes that the only existing precedent for mussel farming coexistence with offshore energy development cited by BML, at North Hoyle, is not located in the EEZ.

3.6.109. The ExA also notes that in any case, any future aquaculture co-existence proposals would need to be subject to marine licencing and attendant obligations to carry out



environmental impact assessment including other fishing and sea users, navigational safety assessment and emergency response co-ordination planning and so on.

- 3.6.110. The ExA considers that the Applicant made reasonable and proportionate endeavours to undertake pre-application dialogue with the fishing industry and understands that no consultee identified aspirations for coexistence of aquaculture in the EEZ. Noting the lack of clear spatial policy allocation for mussel aquaculture in the EEZ within the North Sea, the ExA also considers that it would not have been reasonable in pre-application consultation to have proactively sought out transboundary consultees on the subject of aquaculture,
- 3.6.111. With regard to the BML assertion in [\[REP5-093\]](#) (paragraphs 33 to 38) that the Applicant has not properly followed NPS policy, the ExA notes in NPS EN-3 paragraph 2.4.48 the words “*encouraged*” and “*where reasonably possible*” and considers that in the circumstances the Applicant could not do more to promote coexistence with aquaculture within the confines of this Proposed Development.
- 3.6.112. The ExA therefore considers that there was no neglect by the Applicant of policy with regard to aquaculture. In any case, the ExA notes that the Crown Estate’s response [\[REP6-102\]](#) submitted at the end of the Examination confirms that there is no current mechanism available for a lease or sub-lease to be granted by the Crown Estate for aquaculture activities outside the 12 nm English territorial sea zone. Therefore, it would not be possible to create a sub-lease to enable co-location of floating infrastructure for mussel farming within the Proposed Development.

## CONCLUSIONS

- 3.6.113. Based on the evidence presented and discussed above, the ExA concludes that the policies of the NWMP relevant to impacts on commercial fishing have been complied with, and noting that impacts on fish and shellfish ecology are discussed in section 3.7 of this Report, that NPS EN-3 paragraphs 2.8.319, 2.8.321 to 2.8.323 and 2.8.345 have been complied with and that there are no other important and relevant commercial fisheries considerations.
- 3.6.114. The ExA concludes that NWMP policy NW-AQ-1 which seeks to protect “*existing aquaculture operations as well as potential future opportunities for aquaculture within spatially defined strategic areas of sustainable aquaculture production*” does not apply to the offshore location of the Proposed Development in the EEZ area. The ExA considers that it would not be reasonably possible for the Applicant to commit to any explicit provision for potential future aquaculture co-existence and the lack of such provision does not weigh against the making of a DCO.
- 3.6.115. NPS EN-3 paragraph 2.8.347 states that “*Where a proposed development is likely to affect the future viability or safety of an existing or approved/licensed offshore infrastructure or activity, the Secretary of State should give these adverse effects substantial weight in its decision-making.*” The ExA concludes that safety of scallop dredging can be managed by lifting of dredge gear when in the vicinity of infrastructure including cable protection, the charted as-installed location of which is to be made available to the fishing community under measures secured in the recommended DCO. The ExA is satisfied with the Applicant’s case that any instance of shallow cable burial or exposure would be identified, notified and remedied rapidly by the undertaker operating the OWF under commitments secured in the recommended DCO and in the mutual interests of the undertaker and stakeholders.

- 3.6.116. Also with regard to NPS EN-3 paragraph 2.8.347, the ExA concludes that even if IP concerns about their ability of Scottish west coast scallop fishers to return to queen scallop fishing at pre-construction levels are subsequently found (by post-construction monitoring secured through the FLCP) to be justified, there are opportunities for continuing that fishery on other scallop grounds in the immediate vicinity of the Proposed Development, notably to the immediate south-west where queen scallop fishing already takes place.
- 3.6.117. The ExA is satisfied that potential socio-economic effects for commercial fisheries have been considered adequately both in the ES assessment and in the Applicant's mitigation and adaptive management commitments. However, the ExA alerts the SoS to the Applicant's observation during the Examination on the potential complicating effect of a new FMP for queen scallop in English waters on which DEFRA has been consulting (referenced above), in that some of the measures proposed in that consultation (such as introducing controls on fishing gear specification) could also lead to reductions in queen scallop landings [\[REP5-013\]](#).
- 3.6.118. The ExA accepts as reasonable and proportionate the Applicant's commitments to mitigation of effects to commercial fishing, post-consent monitoring of fishing activity and adaptive management through the FLCP secured via the recommended DCO. With the exception noted in the following paragraph about restricted access to or loss of queen scallop fishing grounds, the ExA concurs with the Applicant's assessment that the significance of effects of the Proposed Development overall on other commercial fisheries would be negligible adverse to pelagic and static gear fisheries and minor adverse for IoM and Scottish west coast scallop dredge fisheries.
- 3.6.119. For the reasons argued in the ExA considerations above, the ExA concludes the residual effect to the Scottish west coast scallop vessels of restricted access or of loss of queen scallop fishing ground for the project alone and cumulatively with the proposed Mona OWF in nearby Welsh waters (for which another SMZ has been proposed as mitigation for adverse effects to the same west coast Scottish queen scallop fishing vessels) would in all phases be of moderate adverse significance, rather than minor adverse as assessed by the Applicant, and this is therefore significant in EIA terms.
- 3.6.120. The ExA considers that adequate assessment and engagement has been undertaken by the Applicant on transboundary commercial fisheries matters and the ExA is satisfied with the Applicant's assessment that there would be no significant transboundary effects for non-UK fishing vessels or fisheries.
- 3.6.121. Therefore, based on likely moderate adverse residual effects to queen scallop fishing, in accordance with NPS EN-3 paragraphs 2.8.320 and 2.8.321 the ExA attributes to commercial fishing matters moderate weight against the making of a DCO for the Proposed Development both alone and cumulatively with the proposed Mona OWF.

## **3.7. FISH AND SHELLFISH ECOLOGY**

### **INTRODUCTION**

- 3.7.1. This section considers the effects of the Proposed Development, both alone and cumulatively, on fish and shellfish with a study area encompassing the area

seaward of mean high-water springs (MHWS). There is the potential for the construction and decommissioning phases, including activities occurring both above and below the seabed, to impact fish communities, migration routes, spawning activities and nursery areas of particular species. There is some overlap with potential impact to commercial fisheries, which is reported separately in section 3.6 above.

- 3.7.2. In its consideration of this topic the Examining Authority (ExA) has had regard to the overarching National Policy Statement for Energy (NPS EN-1) taken together with the NPS for Renewable Energy Infrastructure (NPS EN-3). These national policy statements have been summarised in [Chapter 2](#) of this Report but for brevity section 5.4 of NPS EN-1 and sections 2.8.147 to 2.8.151, 2.8.245 to 2.8.249, 2.8.302 to 2.8.306, 2.8.310 and 2.8.318 to 2.8.324 of NPS EN-3 are pertinent to fish and shellfish ecology.
- 3.7.3. The ExA has also had regard to the North West Inshore and North West Offshore Marine Plan (NWMP), which aims to deliver the high level marine objectives set out in the Marine Policy Statement, and which is of relevance to this section of the Report, specifically Policies NW-FISH-3, NW-MPA-1, NW-BIO-2, NW-INNS-1, NW-DIST-1, NW-UWN-2 and NW-CE-1.

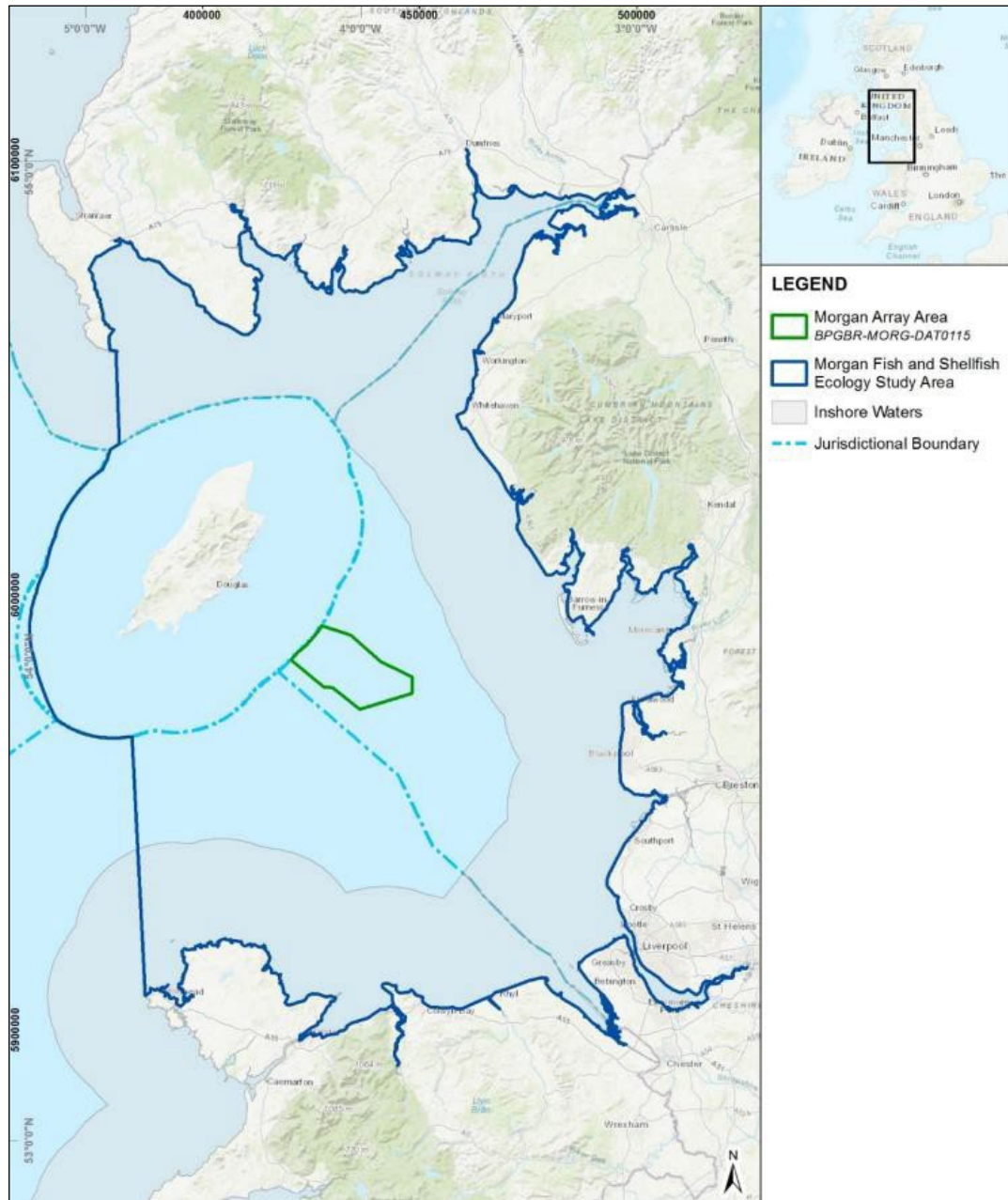
## THE APPLICATION

- 3.7.4. ES Volume 2, Chapter 3: Fish and Shellfish Ecology [\[APP-021\]](#), which was updated at Deadline (D) 6 during the Examination [\[REP6-030\]](#) assesses the effects of the Proposed Development from construction to decommissioning on fish and shellfish ecology. The chapter draws upon information contained within ES Volume 3, Annex 3.1: Underwater Sound Technical Report [\[APP-028\]](#), ES Volume 4, Annex 3.1: Fish and Shellfish Ecology Technical Report, and ES Volume 4, Annex 6.1: Commercial Fisheries Technical Report [\[APP-059\]](#).
- 3.7.5. The Applicant also notes that ES Chapter 3 should be read as part of the wider ES, with particular reference to ES Volume 2, Chapter 1: Physical Processes [\[APP-013\]](#), ES Volume 2, Chapter 2: Benthic Subtidal Ecology [\[APP-020\]](#), and ES Volume 2, Chapter 4: Marine Mammals [\[AS-010\]](#) along with their respective technical reports in ES Volume 4.
- 3.7.6. The Applicant explains in ES Chapter 3 that the fish and shellfish ecology associated with the Morgan Array Area was characterised primarily through desktop review due to the large amount of data publicly available. Additionally, data opportunistically collected from seabed characterisation surveys was incorporated to help increase the scope of the review and to provide empirical evidence to support characterisation of habitat for substrate-specific species, such as herring and sandeel. Impacts which the Applicant scoped out of the assessment for fish and shellfish ecology included accidental pollution during construction, operations and maintenance and decommissioning phases; underwater sound from wind turbine operation during operations and maintenance phase; and underwater sound from vessels during all phases.

## Baseline

- 3.7.7. On the basis that fish and shellfish are spatially and temporally variable, in agreement with consultees the Applicant has defined a broad study area, which covers the east Irish Sea, extending from MHWS west from the Mull of Galloway in Scotland to the western tip of Anglesey, following the 12 nm territorial sea limit of the Isle of Man (IoM). This is shown in Figure 16 below.

**Figure 16: Fish and Shellfish Ecology Study Area<sup>17</sup>**



- 3.7.8. The desktop review and site-specific survey results showed the presence of a range of fish, shellfish, and shark and ray species with spawning, nursery or feeding grounds in the vicinity of the Proposed Development, and in the wider fish and shellfish ecology study area. The Applicant notes that species of particular ecological interest includes herring, with high and low intensity spawning grounds to the west and northwest of the Morgan Generation Assets. However, the most suitable herring spawning grounds were identified entirely outside of, but within 10km of the Morgan Array area, and the data also found that the majority of the fish and shellfish ecology study area had unsuitable sediment for herring spawning, with only small patches of suitable habitat mainly in the north section of the array area. Although herring spawning grounds do not directly overlap the Morgan Array Area,

<sup>17</sup> Source: ES Volume 2, Chapter 3, Figure 3.1 [APP-021] - do not scale.

this specific area of the Irish Sea has been denoted as key spawning habitat for the species.

- 3.7.9. Sandeel, which are a key prey species for many marine predators, are also noted as having important populations and spawning grounds in the area, particularly in the west and south of the Morgan Array area. Like herring, sandeel are noted to be an important prey species for birds, other fish and marine mammals. Further, cod are noted as a species of importance within the area, with mapped high intensity spawning grounds spanning the east Irish Sea, encompassing the Morgan Array area.
- 3.7.10. The ES reports that consultation with stakeholders highlighted the importance of king and queen scallop to commercial fishing activities. Information from vessel position data and outputs from fisheries stakeholder consultation were incorporated to show the distribution of key fishing and spawning grounds for these species, with overlap with the Morgan Generation Assets identified in the west of the Morgan Array area.

#### **Potential Impacts Assessed by the Applicant**

- 3.7.11. The potential impacts assessed in ES Chapter 3, include:
- Temporary habitat loss/ disturbance
  - Underwater sound during the construction phase impacting fish and shellfish receptors
  - Increased suspended sediment concentrations (SSCs) and associated sediment deposition
  - Long term habitat loss
  - Electromagnetic field (EMF) from electrical cabling
  - Introduction and colonisation of hard structures
  - Disturbance/ remobilisation of sediment-bound contaminants
  - Injury due to increased risk of collision with vessels (basking shark only)
- 3.7.12. The criteria for determining the significance of effects were based on a two-stage process that involved defining the magnitude of the impacts and the sensitivity of the receptors. The definitions of sensitivities of fish and shellfish important ecological features (IEFs) were informed by the Marine Evidence based Sensitivity Assessment (MarESA) and developed by the Marine Biological Association, supported by DEFRA, Natural England, the JNCC, and NRW.
- 3.7.13. Primary mitigation measures to reduce potential impacts include:
- Adherence to a Marine Mammal Mitigation Protocol (MMMP) in accordance with the outline document [[APP-072](#)] that requires implementation of a piling soft start and ramp-up, sets a maximum separation limit of 15 km and a minimum separation limit of 1.4 km for concurrent piling, as well as sets the limit on maximum hammer energy to be used during piling.
  - Adherence to an Offshore Construction Method Statement (CMS) including cable burial where possible and cable protection, and requiring material arising from drilling and/or sandwave clearance to be deposited in close proximity to the works.
  - Adherence to an Environmental Management Plan (EMP) including a marine pollution contingency plan, which would include planning for accidental spills, address all potential contaminant releases and include actions to minimise invasive non-native species (INNS), including a biosecurity plan to limit spread and introduction of INNS.



- Adherence to an Underwater Sound Management Strategy (UWSMS) in accordance with the outline document [APP-068] including consideration of Noise Abatement Systems (NAS) as part of the mitigation options to mitigate for the likelihood of temporary or permanent auditory injury or behavioural impacts to fish and marine mammals.

- 3.7.14. Overall, the Applicant concludes that subject to the implementation of primary and tertiary mitigation measures, temporary and long-term habitat loss/ disturbance would be of minor adverse significance to fish and shellfish receptors, as the proportion of habitat lost within the Morgan Array Area is predicted to be small in the context of other similar available habitats in the wider fish and shellfish ecology study area. All other impacts are also considered to be not significant, except for underwater sound impacts. The project alone assessment predicts potentially significant effects to herring as a result of underwater sound generated by piling during the construction phase within the herring spawning period of late September for three to four weeks. With mitigation to be agreed with the licensing authority and SNCBs and implemented through the UWSMS, which is secured in the deemed marine licence, the Applicant considers that there will be no residual significant effect.
- 3.7.15. The Applicant considers that no fish and shellfish ecology monitoring to test the predictions made within the impact assessments is necessary.
- 3.7.16. Brief summaries of potential effects as reported in the ES for each phase are presented below.

### **Construction Phase**

- 3.7.17. The installation of the infrastructure within the fish and shellfish ecology study area may lead to 61,422,400m<sup>2</sup> of temporary habitat loss/disturbance during the construction phase, equating to approximately 6.43% of the Morgan Generation Assets area and is associated with sandwave and unexploded ordnance (UXO) clearance, jack-up events and cable installation. The Applicant reports that the most vulnerable species to temporary habitat disturbance are likely to be shellfish, with European lobster and king and queen scallop known to inhabit the study area. Nonetheless, the Applicant reports that king and queen scallop are likely to recover well from any disturbance with king scallop found to recover to their population carrying capacity within less than three years following temporary habitat loss, and queen scallop noted to fully recover within one year post disturbance. European lobster, on the other hand, are reported to only be capable of recolonising an area once the original substrate type has returned, and while recovery of benthic assemblages may occur over relatively fast timescales, recovery of lobster species may take up to 10 years in some areas of coarse sediments. The significance of effect is deemed to be minor adverse, which is not significant in EIA terms.
- 3.7.18. With regard to underwater sound, the Applicant reports that the installation of pin piles, UXO clearance and geophysical surveys have the capability to cause injury and/ or disturbance to fish and shellfish species. The impact of underwater sound on most fish and shellfish receptors during the construction phase is reported to be of low magnitude. The Applicant also reports that no injury criteria has been developed for shellfish, but they are expected to be less sensitive than fish species.
- 3.7.19. In relation to key fish species, the Applicant considers that based on the extent of area available for cod spawning outside the modelled piling impact zone, the magnitude of impact is considered to be low during spawning season and negligible

at other times, and whilst cod have high sensitivity to underwater sound, the significance of effect is reported to be minor adverse.

- 3.7.20. For herring, the impact from piling is reported to be short term (noting spawning is evidenced to occur over three to four weeks from late September). The magnitude of the impact is therefore considered to be medium during spawning season and negligible outside that. However, as herring has high sensitivity to underwater sound the significance of effect is reported to be moderate adverse, which is significant in EIA terms.
- 3.7.21. In relation to the noise impact associated with UXO clearance, the Applicant notes in ES Chapter 3 that detonation of UXO would represent a short term (seconds) increase in underwater sound (sound pressure levels and particle motion) which would be elevated to levels which may potentially result in injury or behavioural effects on fish and shellfish species. However, the Applicant suggests that benefits derived from the implementation of a MMMP, such as use of an acoustic deterrent device (ADD) and soft start charges, are also expected to apply to some fish species. Further with regard to pre-construction geophysical surveys, the Applicant reports that they are likely to be very short term and spatially limited at any one time and will also operate largely outside of the hearing frequencies of most fish and shellfish receptors.
- 3.7.22. The construction, operations and maintenance, and decommissioning activities may lead to increased SSCs and associated sediment deposition. Modelling of SSCs and specific details of the outcomes of these scenarios is available in ES Volume 4, Annex 1.1: Physical processes technical report [\[APP-033\]](#) and in ES Volume 2, Chapter 1: Physical Processes [\[APP-013\]](#) and is discussed within section 3.10 of this Report. Broadly, the Applicant's modelling found that SSCs would increase by up to 50 mg/l in the area immediately surrounding the piling, with a rapid reduction back to background levels of sedimentation as time and distance from the piling activity increased. However, SSCs of 50 to 500 mg/l was modelled for installation of cabling in the immediate vicinity of the works, with the higher concentration associated with the inter-array cables. The Applicant reports that the material settles during slack water and then is re-suspended to form a secondary plume which becomes amalgamated. The impact on fish and shellfish is therefore predicted to be of local spatial extent, short term duration, intermittent and high reversibility.
- 3.7.23. ES Chapter 3 notes that juvenile fish are more likely to be affected by habitat disturbances (such as increased SSC) than adult fish, due to lower levels of mobility. However, the Applicant reports that the north Irish Sea experiences regular temporary increases in SSC, linked heavily to interannual changes in general meteorological conditions and the frequency of spring storms, such that most juvenile fish will be largely unaffected by the relatively low-level temporary increases in SSC resulting from the construction phase. The Applicant also reports that while many shellfish species have a high tolerance to SSCs, queen scallop have the potential to suffer 74.1% to 88.9% mortality following continual burial under less than 5 cm of sediment for two to four consecutive days. The Applicant reports in ES Chapter 1 [\[APP-013\]](#) that sedimentation of greater than 5 cm thickness is expected in the immediate vicinity of the construction activities on the first day following cessation of construction encompassing a very small area around the source, although sediment is expected to dissipate to background levels for the area by the action of tidal cycles within approximately two days following the cessation of construction, and would reduce the potential for mortality of individuals. Overall, the significance of effect on most fish and shellfish receptors from increased SSCs is predicted to be minor adverse, which is not significant in EIA terms.

- 3.7.24. In terms of disturbance of sediment contamination, the levels of contamination of existing sediment across the Morgan benthic subtidal ecology study area were assessed to be low. In addition, the Applicant reports that following disturbance activities, the majority of re-suspended sediments are expected to be deposited in the immediate vicinity of the works and any release of contaminants is likely to be rapidly dispersed with tide and currents. Therefore, significant adverse ecological effects are not expected.
- 3.7.25. The Planning Inspectorate's [Scoping Opinion](#) required the Applicant to assess the potential for vessel collision with basking shark and any significant effects that are likely to occur. Vessel traffic associated with the construction activities would result in up to 1,878 return trips by construction vessels and up to 63 construction vessels on site at any one time over the potential four-year construction period; this has the potential to increase interactions with basking sharks. However, the Applicant reports that no basking sharks were observed during 12 months of aerial surveys of the Morgan Array area and although they are known to occur in the area, there is no evidence that the area is particularly important for basking shark. Subject to vessel operators adhering to the Offshore EMP, the significance of effect is considered to be minor adverse, which is not significant in EIA terms.

#### ***Operational and Maintenance Phase***

- 3.7.26. ES Chapter 3 reports that operations and maintenance activities within the fish and shellfish ecology study area would result in temporary habitat disturbance. The Maximum Design Scenario (MDS) accounts for up to 11,362,800 m<sup>2</sup> of temporary habitat disturbance within this phase, which equates to a small proportion (1.19%) of the Morgan Generation Assets area. The impact is predicted to be of local spatial extent, short term duration, intermittent and high reversibility, such that the significance of effect on most fish and shellfish receptors is considered to be no more than minor adverse.
- 3.7.27. The Applicant also reports that maintenance activities, such as cable repair, within the fish and shellfish ecology study area may lead to increases in SSC and associated sediment deposition over the expected 35-year operational lifetime of the Morgan Generation Assets, but the magnitude of the impacts would be a fraction of those quantified for the construction phase. The significance of effect is therefore predicted to be negligible for most fish and shellfish receptors and minor adverse for king and queen scallop, which is not significant in EIA terms.
- 3.7.28. Long term habitat loss would occur directly under all wind turbine and offshore substation platform (OSP) foundations, while the introduction of scour and cable protection would also lead to habitat alteration. The Applicant reports that the fish species most vulnerable to long-term habitat loss include herring and sandeel, as their eggs are laid on the seabed. However, as high and low intensity herring spawning habitat occurs primarily outside the Morgan Assets boundary, the ES reports that the species would not be affected directly by long term habitat loss. The Applicant also reports that the presence of Morgan offshore wind farm infrastructure would result in direct impacts on sandeel habitat within the Morgan Array Area, though the proportion of habitat affected is reported to be small, and this area is smaller still in the context of the known sandeel habitats (including spawning and nursery habitats) in the fish and shellfish ecology study area. The Applicant therefore predicts that the significance of effect would be minor adverse.
- 3.7.29. In relation to EMFs from subsea cables, ES Chapter 3 notes that fish and shellfish species are able to detect applied or modified magnetic fields. The Applicant reports

that demersal species that dwell on the bottom will be closer to the undersea power cables and thus could encounter higher EMF levels when near the cable. However, the rapid decay of the EMFs with horizontal distance (within metres) minimises the extent of potential impacts, and as the Applicant aims to bury the cables to a minimum depth of 0.5m, it reports that the significance of effect would be minor adverse.

3.7.30. The construction and operations and maintenance activities on the generation assets and rock protection around the transmission assets would lead to colonisation of hard surfaces with consequent effects on fish and shellfish populations. The Applicant reports that this may produce some potentially beneficial effects, for example the likely increase in biodiversity and individual abundance of reef species and total number of species over time and may provide refuge as well as increasing feeding opportunities for larger and more fish and shellfish mobile species.

3.7.31. It is also stated in ES Chapter 3 that it is likely that the greatest potential for beneficial effects from the introduction and colonisation of hard structures, exist for crustacean species, such as crab and lobster, due to expansion of their natural habitats. However, there is potential for impacts upon diadromous fish species resulting from increased predation by marine mammal species, noting data from the north Irish Sea has found that harbour porpoise and grey seal utilise wind farm areas for feeding. Nevertheless, the Applicant reports that it is unlikely that this would result in significant increased predation on diadromous species. Overall, it is reported that the significance of effect would be minor adverse.

#### ***Decommissioning Phase***

3.7.32. The ES considers that increases in SSCs and the potential for the remobilisation of sediment bound contaminants may occur during decommissioning when cables are removed and if suction caisson foundations are removed. Similarly, a small proportion of sediment may be released during the removal of any ballast material from gravity-based foundations, which would be disposed of off-site. However, sediment disturbance during decommissioning is reported to be considerably lower than for the construction phase (primarily as a result of no sandwave clearance and seabed drilling), while scour and cable protection is intended to remain in situ, and in the case of piled foundations the Applicant reports that the piles would be cut off, thereby limiting disturbance of the seabed. The Applicant therefore concludes that the significance of effect on fish and shellfish receptors would be minor adverse.

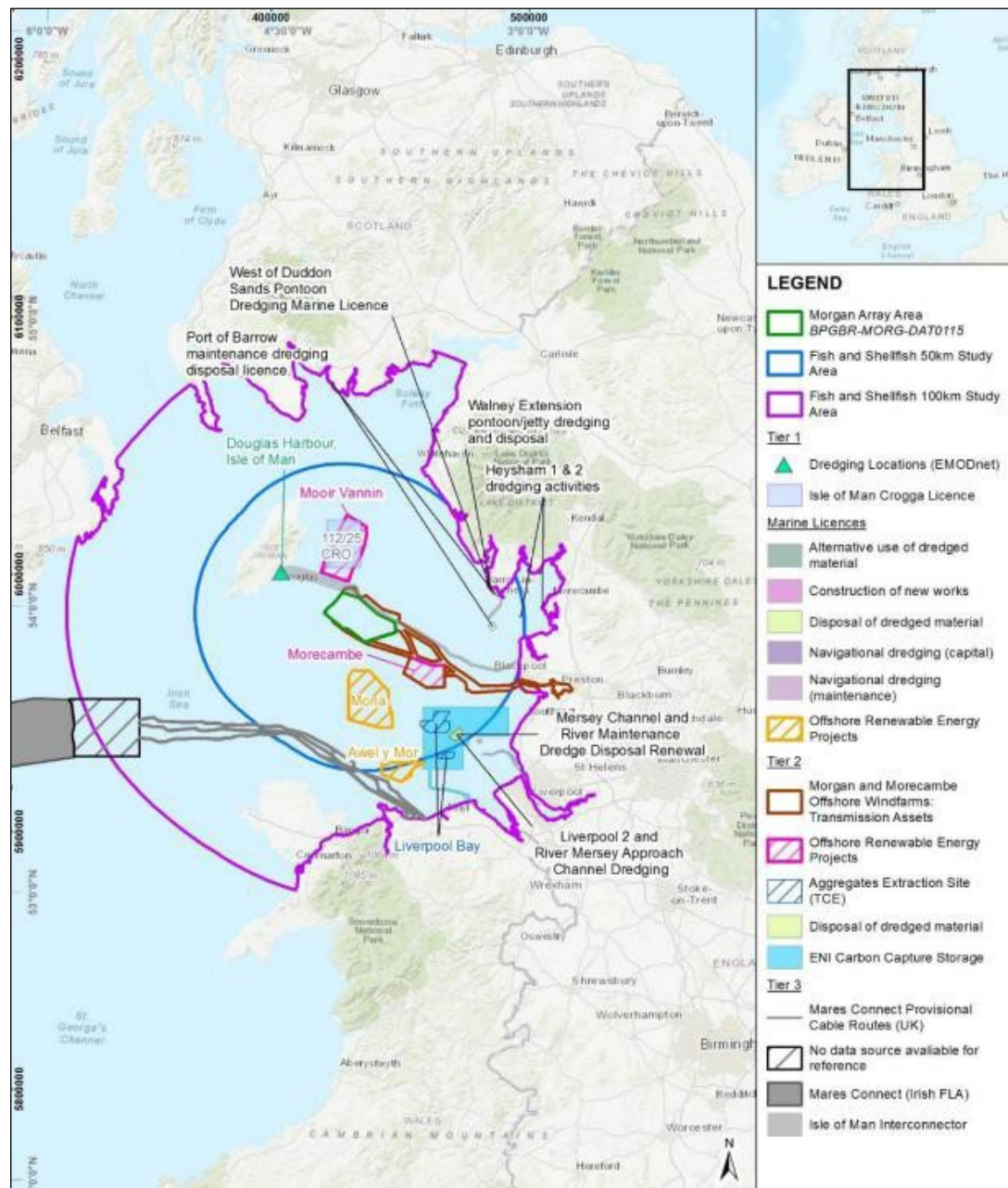
3.7.33. Decommissioning would involve leaving the scour protection, cable protection, and cable crossing protection in place, representing up to 1,252,116 m<sup>2</sup> of permanent subtidal habitat loss. For all fish and shellfish species, except herring, the effect is predicted to be of minor adverse significance. For herring, negligible significance is ascribed due to the absence of mapped spawning grounds and presence of highly limited substrate suitable for herring spawning within the footprint of long-term habitat loss.

#### **Cumulative Effects**

The list of other projects, plans and activities considered within the Cumulative Effects Assessment (CEA) for fish and shellfish ecology are presented in ES Chapter 3, Table 3.31 [[APP-021](#)] and shown illustratively in Figure 17 below.



Figure 17: Fish and Shellfish Ecology CEA<sup>18</sup>



3.7.34. Broadly, the approach to identifying projects considered in the fish and shellfish ecology CEA is consistent with that taken for subtidal benthic ecology (screening projects to a range of 50 km for additive effects) and physical processes (screening projects within two tidal excursions). However, for underwater sound during the construction phase, a larger buffer of 100 km from the Morgan Array Area has been used to screen projects to account for the greater zone of influence associated with construction sound (specifically piling).

3.7.35. All cumulative effects assessed, except for underwater sound impacts to herring and cod, are reported to have a minor adverse significance of effect, which is not significant in EIA terms. The key potential cumulative effect from underwater sound generation is considered by the Applicant to be the increased area of ensonification.

<sup>18</sup> Source: ES Volume 2, Chapter 3, Figure 3.15 [APP-021] - do not scale.



The Applicant predicts cumulative effects of moderate adverse significance for herring from underwater sound impacts resulting from Morgan piling alongside other projects and plans in CEA Scenarios 1, 2 and 3 during the herring spawning period only. Cumulative effects of moderate adverse significance are also predicted for cod from underwater sound impacts resulting from Morgan piling alongside other projects and plans in CEA Scenario 3.

## **ISSUES CONSIDERED DURING THE EXAMINATION**

- 3.7.36. There were relatively few fish and shellfish ecology issues of contention during the Examination but noise impacts from piling on fish (notably herring and cod) and shellfish (notably scallops) persisted throughout the Examination. These are reported on separately below.

### **Noise Impacts from Piling (fish)**

- 3.7.37. The MMO's relevant representation (RR) [\[RR-020\]](#) initially queried the modelling and evidence base used to inform the assessment for injury and behavioural responses to hearing sensitive fish, and it stated it had identified inconsistencies between the MDS outlined in the Project Design ES Chapter and the MDS used to inform the impact assessment in the Fish Ecology ES Chapter 3.
- 3.7.38. The MMO also flagged a number of other inconsistencies, including the thresholds used/ presented for recoverable injury and for mortality and potential mortal injury, which it said undermined the confidence in the modelling presented. The MMO requested revised modelling figures to show the range of impact from underwater noise for hearing sensitive fish based on the following thresholds: cumulative sound exposure level (207 SELcum), recoverable injury (203 SELcum), and Temporary Threshold Shift (TTS) (186 SELcum) [\[REP2-029\]](#).
- 3.7.39. The MMO also stated that based on figures 3.4 and 3.6 shown in ES Chapter 3, concurrent piling and single point piling underwater noise contours fully overlap with the high intensity herring spawning grounds in the south east of the IoM and partially overlap with the high intensity spawning grounds in the north and northeast of the IoM. As a result, the MMO stated that project piling works could have potentially significant impacts on herring spawning if piling activities were to occur during their spawning season (September to October, inclusive), including disrupting the migration and aggregation of adult herring at the spawning grounds and interfering with their ability to spawn when ready. The MMO therefore recommended placing a seasonal restriction on piling in order to protect spawning herring and their eggs and larvae during the spawning season.
- 3.7.40. The MMO also noted that the proposed development falls entirely within the high intensity cod spawning grounds, but pending clarifications on the underwater noise modelling for cod, it considered a seasonal piling restriction would likely be necessary during the cod spawning season (January to April inclusive) to protect gathering and spawning adult cod, and their eggs and larvae.
- 3.7.41. Nonetheless, the MMO acknowledged that the use of noise abatement technologies during piling operations at the Morgan Array could reduce the range of impact from underwater noise sufficiently, but suitably accurate and detailed modelling would need to be provided for the MMO to consider refining its request for a seasonal piling restriction [\[RR-020\]](#).
- 3.7.42. The Applicant subsequently provided amended contour plots [\[PD1-006, PD1-008\]](#) and further clarifications on underwater sound overlaps with cod and herring

spawning grounds and thresholds [REP3-005]. It advised that the changes in threshold contours represented a reduction in overlap with areas of low and high intensity herring and cod spawning grounds but not to the extent that there was a meaningful change in the assessment of the impact of underwater sound from piling activities. The MMO remained in disagreement with the Applicant's conclusion for the project alone assessment of underwater sound impacts on cod as being minor adverse and not significant in EIA terms. The MMO advised that the impacts to cod from underwater noise were significant for the project alone and for the project cumulatively with other projects [REP4-041].

- 3.7.43. The Applicant resisted for much of the Examination the imposition of a blanket piling restriction stating it would be disproportionate to the ecological risk. It also stated it was committed to the development of an Underwater Sound Management Strategy (UWSMS), which was conditioned in the draft Deemed Marine Licenses (DMLs) and the purpose of which would be to apply the mitigation hierarchy, from design refinement to the application of additional measures where required. Such measures may include temporal management, or the application of additional measures such as soft-starts and Noise Abatement Systems (NAS) with stakeholder input to manage the effects of underwater sound to non-significant levels to ensure no residual significant effect [PD1-017], [REP1-009], [REP3-004], [REP4-006], [REP5-009]. The Applicant also highlighted multiple times that the UWSMS was consistent with a Site Integrity Plan (North Sea)/ Piling Strategy and would be developed with stakeholder engagement and would require approval from the MMO prior to any construction activities commencing.
- 3.7.44. The MMO was clear throughout the Examination that it supported the commitment to develop an UWSMS and for it to be finalised post-consent, but until deadline (D) 6 it maintained that the commitment alone was not sufficient to remove the need for seasonal piling restrictions for herring and cod. It was primarily concerned that there were no tangible mitigation strategies (using noise abatement technologies or otherwise) for reducing the range of behavioural effects [RR-020], [REP2-029], [REP3-037], [REP4-041]. It noted that its recommendation was in line with its previous recommendations for projects of a similar nature in the Irish Sea, for example, the Walney Extension Offshore Wind Farm, which had a piling restriction during the cod spawning season to ensure any significant impacts to cod were mitigated. The MMO also clarified that in relation to the Site Integrity Plan (North Sea) referred to and relied upon by the Applicant, that process was adopted for a specific reason for in-combination impacts only, so it is not applicable to the Proposed Development.
- 3.7.45. The Applicant explained at ISH2 [EV5-010] that there was no certainty that it would be using piling methods, as it could use gravity-based solutions or suction buckets, but in any event it would develop its mitigation options as soon as new DEFRA marine noise policy was released, which would be incorporated into the final UWSMS.
- 3.7.46. Nonetheless, the ExA asked IPs whether there was any further evidence available to help define an appropriate and informed exclusion period for the area of the Proposed Development, whether a refined spatial piling exclusion area could be defined instead of an exclusion period over the whole array area, and whether any changes were necessary to the draft Development Consent Order (DCO)/ DMLs to reflect seasonal piling restrictions as a fallback position in the event that appropriate post consent controls/ measures are not able to be agreed in the final UWSMS (ExQ1 MFS 1.2) [PD-004]. The MMO advised that it was discussing spatial/ map options with the Applicant and that it would provide a seasonal piling fallback

condition to be included in the DMLs because it was the only enforceable option for mitigating the significant impacts to spawning cod and herring which were identified in the ES [\[REP3-037\]](#).

- 3.7.47. In the meantime, the Applicant argued that if a seasonal piling restriction was required, the period over which that should apply needs to be informed by spawning intensity. In line with MMO advice the Applicant submitted additional information drawing on peer-reviewed sources to support a reduced seasonal piling restriction case, which suggested peak spawning for cod occurs in March [\[REP4-010\]](#). Updates were also made to the outline UWSMS [\[REP5-025\]](#) to capture possible temporal phasing for piling during the herring spawning period (described as occurring in late September and lasting for three to four weeks) and during the peak cod spawning period described as occurring 15 February to 31 March).
- 3.7.48. The MMO agreed with the refined dates for the sensitive period for Irish Sea cod [\[REP5-056a\]](#) and considered them evidentially sound. Nevertheless, the MMO highlighted that for the purposes of clarity, a seasonal piling restriction is not the same as ‘temporal phasing’ as described in the UWSMS, in that a seasonal piling restriction refers to an explicit, legally binding and enforceable condition attached to the Applicant’s DML with which they must comply. ‘Temporal phasing’ on the other hand does not carry the same level of binding requirement as specific licence conditions and refers more to voluntarily scheduling of activities around defined periods in time. With that in mind, at D5 the MMO submitted details of a sample condition to restrict piling during spawning periods, which would amend condition 22 of the DMLs.
- 3.7.49. Subsequently, a new DEFRA marine noise policy<sup>19</sup> and a joint position statement of JNCC, Natural England and Cefas on the use of quieter piling methods and noise abatement systems<sup>20</sup> was published on 21 January 2025. This was discussed briefly at ISH3 [\[EV6-007\]](#) and the Applicant submitted a policy compliance statement at D6 [\[REP6-011\]](#). The Applicant also submitted an evidence paper on the effectiveness of noise mitigation systems and/ or NAS in reducing underwater noise for fish [\[REP6-071\]](#) and argued that it corroborates the evidence presented in the Cefas guidance ‘Evidence on the efficacy of underwater noise abatement’ (2024).
- 3.7.50. The Applicant subsequently made further changes to the UWSMS and DMLs to commit to compliance with the new policy [\[REP6-045\]](#), [\[REP7-007\]](#). In practice the revisions included replacement of the conditional wording in the UWSMS that the Applicant would only consider using NAS during piling, to instead committing to adhering to the new marine noise policy, which includes deployment of NAS. Specifically, condition 22 of the draft DMLs was amended by the Applicant to include a new sub paragraph as follows:

*22(2) -- Where driven or part-driven pile foundations are proposed to be installed, the underwater sound management strategy submitted under sub-paragraph (1) must include details of the noise mitigation systems and/ or noise abatement system that will be utilised to manage sound from those piling activities.*

---

<sup>19</sup> DEFRA: [Reducing Marine Noise](#), Published 21 January 2025

<sup>20</sup> JNCC *et al.*: [The use of quieter piling methods and noise abatement systems when installing offshore wind turbine foundations](#), Published 21 January 2025

- 3.7.51. The Applicant considered that those revisions addressed the MMO's concerns and demonstrated that there was no justification for a seasonal piling restriction.
- 3.7.52. The MMO agreed in its closing statement [REP6-094] that those revisions justified removing their request for a seasonal piling restriction in relation to herring in the DML, but not for cod. It stated that as the Morgan array is in the centre of the high intensity cod spawning ground, there is potential for cumulative effects to occur on cod from underwater noise from piling at Morgan and Morecambe Offshore Wind Farms and given the current state of the Irish Sea cod stock, it is judicious to exercise caution under the precautionary principle. The MMO also noted in its final Statement of Common Ground [REP6-081] with the Applicant that it was not satisfied that the Applicant's evidence paper ([REP6-071]) provided adequate evidence to demonstrate the scale of the reduction from use of NAS in the context of the cod spawning ground. Therefore, in the absence of accurate modelling to reflect all piling scenarios, the MMO maintained the request for a temporal piling restriction during the peak of Atlantic cod spawning season from 15 February to 31 March (inclusive).
- 3.7.53. The MMO suggested a revised condition 22 at D6, but further revised that suggestion at D7 [REP7-016].
- 3.7.54. The MMO clarified that if seasonal restrictions for cod are conditioned in the DMLs then the final UWSMS can be used to remove or reduce that requirement when more evidence and information is available at the post consent stage. The Applicant's D7 submission [REP7-004] rejected the suggested drafting put forward by the MMO arguing that it did not meet the tests of necessity, precision and reasonableness.
- 3.7.55. At the end of the Examination there was no agreement on the necessity for a seasonal piling restriction for the cod peak spawning period on the face of the DML.

***ExA considerations on noise impacts from piling (fish)***

- 3.7.56. As captured in this section of the Report there was considerable discussion throughout the Examination on piling noise impacts on fish, particularly cod. The ExA acknowledges the Applicant's commitment to adherence to the DEFRA Reducing Marine Noise Policy (2025) but considers that there is uncertainty on the level of noise reduction that would occur for hearing sensitive cod from use of different NAS technologies, as no specific technology has yet been selected and thus specific modelling has not been applied. The ExA therefore appreciates the MMO's desire for caution and a fallback condition that prevents any piling from 15 February to 31 March (inclusive), as that is the only guaranteed solution at the present time to ensure there are no significant effects on cod.
- 3.7.57. The ExA has itself considered the DEFRA and Cefas marine noise guidance and notes that it largely focuses on marine mammals. It nonetheless states that fish would also benefit from the application of quieter installation methods and/ or NAS and that the implementation of these methods could reduce the need for seasonal piling restrictions. The ExA therefore welcomes the Applicant's amendments to the UWSMS and the Applicant's suggested revision to DML Condition 22 to make clear that where driven or part-driven pile foundations are proposed to be installed, noise mitigation systems and/ or noise abatement systems must be utilised.
- 3.7.58. However, the ExA considers that a fallback condition on the face of the DML is justified in line with NPS EN-3 paragraph 2.8.249, and new drafting of DML

condition 22 is included in the ExA's recommendation DCO (see Table 11 in [Chapter 6](#) of this Report), with a tailpiece to allow the MMO to agree to piling in peak cod spawning period if it is satisfied with the mitigation proposed in the final UWSMS. The Applicant will therefore have the choice to undertake modelling of the chosen NAS technology to assure the MMO that there will be no significant residual effects on cod during the peak spawning period or cease its piling activity at that time.

### Noise Impacts from Piling (Shellfish)

- 3.7.59. The MMO's RR [\[RR-020\]](#) stated that no mitigation measures were included for shellfish, but it considered that was appropriate as no impacts were identified as causing a significant negative impact on shellfish. The MMO's RR also stated that there were no outstanding concerns in relation to this NSIP application in relation to shellfish. However, that position changed part way through the Examination when at D3 the MMO commented that while shellfish were not previously highlighted in its marine noise concerns, there was some evidence in literature that seismic pulses (sound exposure level (SEL) of 161 to 165 dB RMS re 1 mPa2) can cause damage to veliger stages of scallop larvae within close proximity [\[REP3-037\]](#). The MMO therefore requested that the potential impacts on larval stages be considered by the Applicant when reviewing data or in timings of works to mitigate around times when larvae are likely to be in the water column. The MMO also requested that the UWSMS consider king and queen scallop.
- 3.7.60. Those concerns were similarly raised by the Scottish Fishermen's Federation (SFF) [\[REP4-050\]](#), [\[REP5-087\]](#), [\[REP6-103\]](#) following brief discussion of the issue at ISH2 [\[EV-010\]](#), and by the Northern Ireland Fish Producers' Organisation (NIFPO) [\[REP6-097\]](#) who also added that noise related seabed disturbances can resuspend sediments, smothering scallop larvae.
- 3.7.61. Shellfish had been given specific consideration in the underwater sound and sediment deposition sections of ES Chapter 3 (paragraphs 3.9.3.73 to 3.9.3.82 and 3.9.4.15 to 3.9.4.19 [\[APP-021\]](#)) and particle motion sensitivity of shellfish was also described in ES Volume 3, Annex 3.1: Underwater Sound Technical Report (specifically in section 1.10.5 [\[APP-028\]](#)). The Applicant also submitted during the Examination [\[REP4-006\]](#) that it expected there to be limited effect to scallop larvae at a population level and that the literature referred to by the MMO was not a comparable scenario to the potential conditions that would be experienced during construction of the Morgan Array because piling, if employed, would be intermittent across the whole array area and elevated noise levels would never occur continuously over a period of 90 hours (which was the scenario examined in the literature). In addition, the Applicant advised that taking into account the water movements within the Irish Sea, the scallop larvae would never be within a particular impact range for even a full piling sequence. Therefore, as no potential significant effects had been identified, it was considered not appropriate to include scallops (either as adults or larvae) within the UWSMS as a species to be considered. Overall, the Applicant stated that the evidence presented in the ES strongly indicated that both queen and king scallops would return to the impacted areas and would not face significant effects, even within a precautionary approach undertaken within the ES (i.e. assuming a MDS which may not be fully realised) [\[REP4-009\]](#).
- 3.7.62. The MMO was asked to review the Applicant's submissions and to provide a summary of reasons for any disagreement (ExQ2 MFS 2.3 [\[PD-009\]](#)). The MMO advised the ExA that within the remit of the limited time frame of piling noise, larval



movement, protracted and intermittent spawning periodicity and mitigation of the scallop zone for the core fishery area, the current data would not require the inclusion of shellfish larvae into the UWSMS [REP5-056a]. The MMO also noted that the inclusion of a scallop mitigation zone would ensure that there is a significant reduction in the number of foundations within the core scallop grounds, which should reduce further potential of noise effects on larvae when they are in proximity to spawning locations.

- 3.7.63. The commercial fisheries IPs maintained their concerns at the close of the Examination, notwithstanding the revised position of the MMO and the Applicant's commitment to developing and implementing an adaptive pre- and post-construction monitoring programme of king and queen scallop in and around the Morgan Array Area for up to five years post-construction with annual reporting ([REP5-042] and [REP6-051]).

***ExA considerations on noise impacts from piling (shellfish)***

- 3.7.64. The ExA acknowledges that there may be some effects on scallops due to construction operations, including effects on scallop adults and larvae from piling noise, but the evidence suggests that these effects will not be significant, and it is therefore not reasonable to require the Applicant to include noise mitigation requirements for scallops in the UWSMS. The ExA also considers that the Applicant's commitment in the UWSMS to reducing noise effects on specific fish and marine mammals through the use of NAS if piling is employed is also likely to benefit other fish and shellfish receptors due to the general reduction in noise levels in the marine environment.

**CONCLUSIONS**

- 3.7.65. The ExA is satisfied that the effects of the Proposed Development on fish and shellfish ecology have been adequately assessed and as such the ExA considers that the Application meets the requirements of NPS EN-1 and NPS EN-3. Specifically, the ExA considers that the Applicant has identified the species that are the most likely receptors of impacts with respect to spawning grounds and nursery grounds. For example, it has considered their potential to interact with the proposed infrastructure and possible impacts arising from the effects of underwater noise mortality, permanent threshold shift (PTS), TTS and disturbance and it has considered possible avoidance and mitigation measures.
- 3.7.66. Having regard to the ES, the additional supporting material submitted by the Applicant during the Examination, and the relevant evidence of all parties to the Examination, it is the ExA's view that the impacts on fish and shellfish ecology for the Proposed Development alone and cumulatively would be predominantly minor adverse, with some negligible impacts. However, the ExA considers that there is the potential for moderate adverse effects on herring and cod during peak spawning periods from underwater construction noise associated with piling activities from the project alone and cumulatively, but subject to the implementation of secondary mitigation such as NAS and/ or the imposition of a seasonal piling restriction for cod, the ExA is satisfied that those effects could be reduced to minor adverse residual effects.
- 3.7.67. The ExA considers that overall a suitable package of mitigation measures has been secured at the end of the Examination including the requirement for approval of an updated UWSMS prior to construction, which is secured in the conditions of the draft DMLs [REP7-008].

- 3.7.68. As a result, the ExA is satisfied that the provisions of NPS EN-1 (particularly paragraphs 5.4.44, 5.4.45 and 5.4.48) and NPS EN-3 (particularly paragraph 2.8.318) have been satisfied and that all relevant legislative and policy tests for this topic have been met and that subject to the revised drafting of DML condition 22 the residual effects, whilst minor adverse, are not significant in EIA terms.
- 3.7.69. The ExA therefore attributes a little weight against making the Order and this is carried forward into the planning balance.

## **3.8. MARINE MAMMALS**

### **INTRODUCTION**

- 3.8.1. This section considers the effects of the Proposed Development, both alone and cumulatively, on marine mammals. The Examining Authority's (ExA's) analysis and conclusions relevant to the Habitats Regulations Assessment (HRA) and the potential impact on marine mammal features of European Sites are considered in detail in [Chapter 4](#) and [Appendix C](#) of this Report.
- 3.8.2. In its consideration of this topic the Examining Authority (ExA) has had regard to the overarching National Policy Statement for Energy (NPS EN-1) taken together with the NPS for Renewable Energy Infrastructure (NPS EN-3). These national policy statements have been summarised in [Chapter 2](#) of this Report but for brevity section 5.4 of NPS EN-1 and sections 2.8.127 to 2.8.135, 2.8.237 to 2.8.239, 2.8.302 to 2.8.306, 2.8.312 to 2.8.314 of NPS EN-3 are pertinent to marine mammals.
- 3.8.3. The ExA has also had regard to the North West Inshore and North West Offshore Marine Plan (NWMP), which aims to deliver the high level marine objectives set out in the Marine Policy Statement, and which is of relevance to this section of the Report, specifically Policies NW-MPA-1, NW-BIO-2, NW-DIST-1, NW-UWN-1, NW-UWN-2 and NW-CE-1.

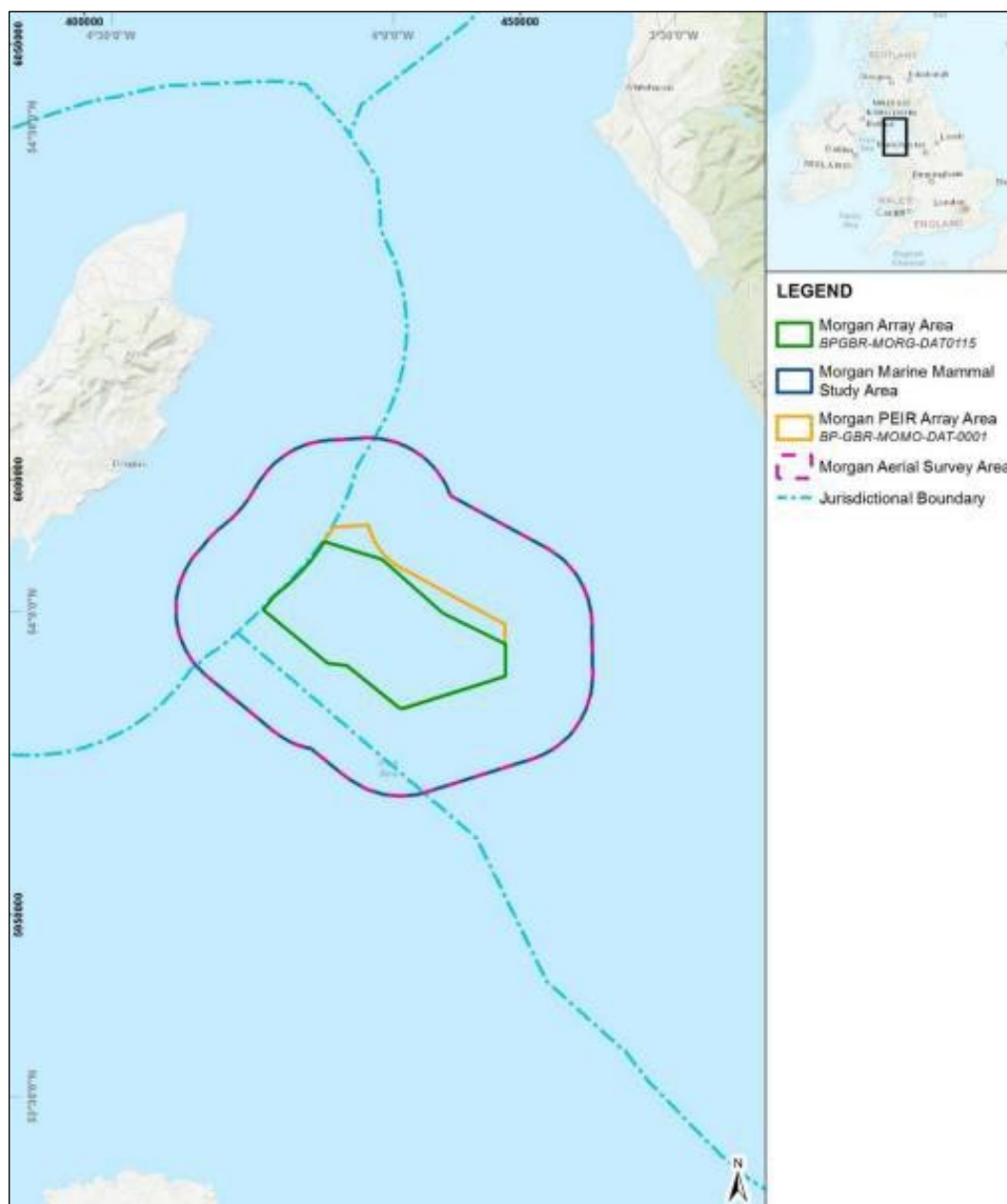
### **THE APPLICATION**

- 3.8.4. ES Volume 2, Chapter 4: Marine Mammals [\[APP-022\]](#) assesses the effects of construction, operation and decommissioning and their effects on marine mammals. The chapter draws upon information contained within ES Volume 4, Annex 4.1: Marine Mammal Technical Report [\[APP-052\]](#), which provides a detailed characterisation of the marine mammal species ecology within the marine mammals study area, as well as survey information. ES Chapter 4 is also informed by ES Volume 3, Annex 3.1: Underwater Sound Technical Report [\[APP-028\]](#).
- 3.8.5. The Applicant also notes that ES Chapter 4 should be read as part of the wider ES, with particular reference to ES Volume 2, Chapter 3: Fish and Shellfish Ecology [\[APP-021\]](#) and ES Volume 2, Chapter 7: Shipping and Navigation [\[APP-025\]](#).
- 3.8.6. The Applicant's Outline Marine Mammal Mitigation Protocol (MMMP) [\[APP-072\]](#), which presents the measures proposed to reduce or eliminate the risk of auditory injury to marine mammals during pre-construction and construction phases of the Morgan Generation Asset, is also pertinent to the assessment along with the Applicant's Outline Underwater Sound Management Strategy (UWSMS) [\[APP-068\]](#).

### **Baseline**

- 3.8.7. For the purposes of the marine mammal characterisation, two marine mammal study areas were defined. Firstly, the Morgan marine mammal study area, which is defined as the area encompassing the Morgan Array Area plus a buffer of approximately 10 to 13.3 km and is based upon the Morgan Aerial Survey Area. This is shown in Figure 18 below.

**Figure 18: Marine Mammal Study Area<sup>21</sup>**

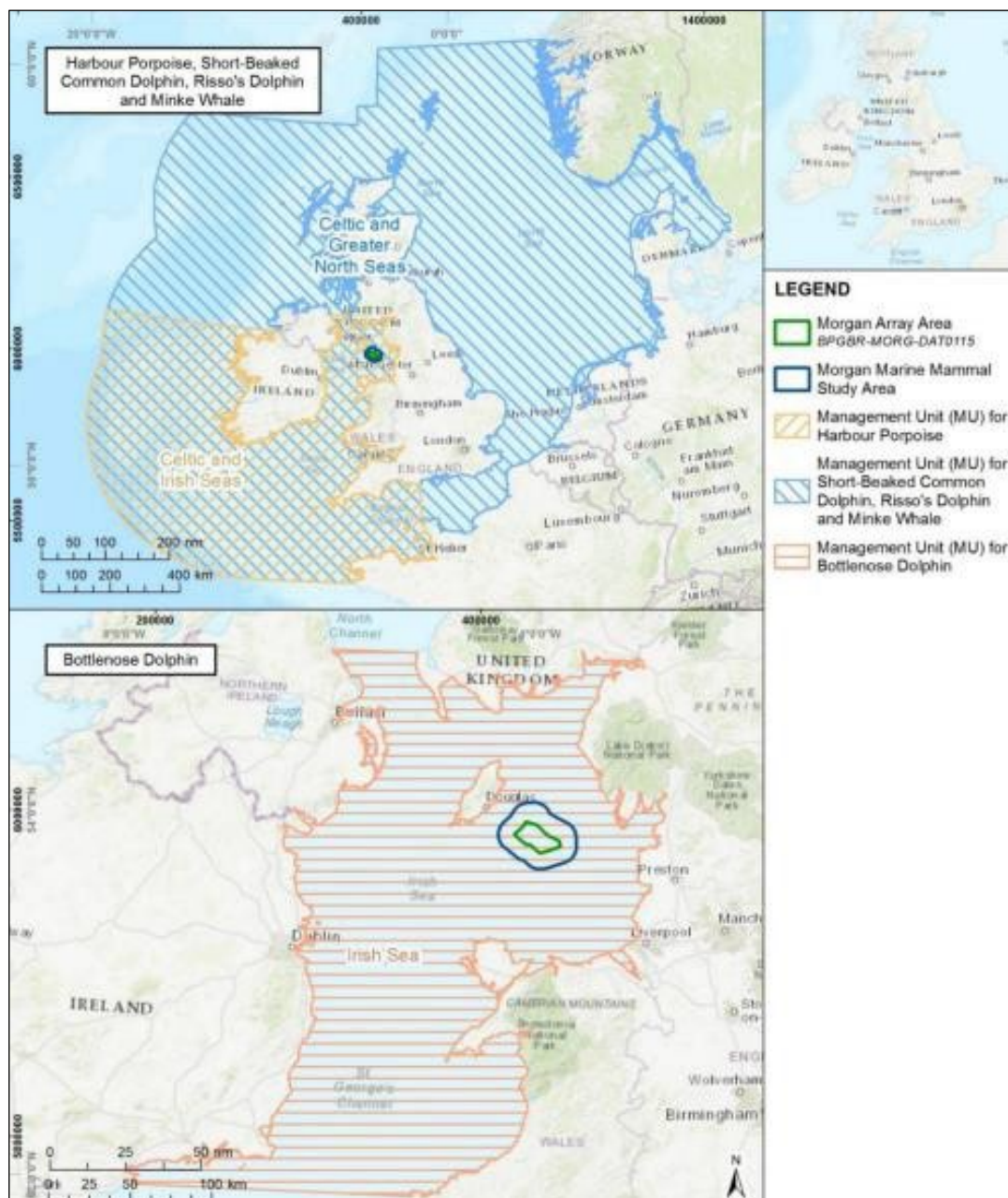


- 3.8.8. Secondly, the regional marine mammal study area, to provide a wider context for highly mobile mammals, based upon species Management Units (MUs), was agreed with a Marine Mammal Expert Working Group (EWG), which includes Natural England, Natural Resources Wales (NRW), the Joint Nature Conservation Committee (JNCC) and the Marine Management Organisation (MMO). The regional marine mammal study area was used as the basis for identifying designated sites

<sup>21</sup> Source: ES Volume 2, Chapter 4, Figure 4.1 [APP-022] – do not scale.

and qualifying interest features that could be affected by phases of the Proposed Development (see Table 4.11 and Figure 4.4 of ES Chapter 4 [APP-022] for the list and location of designated sites). The species MUs are shown in Figures 19 and 20 below.

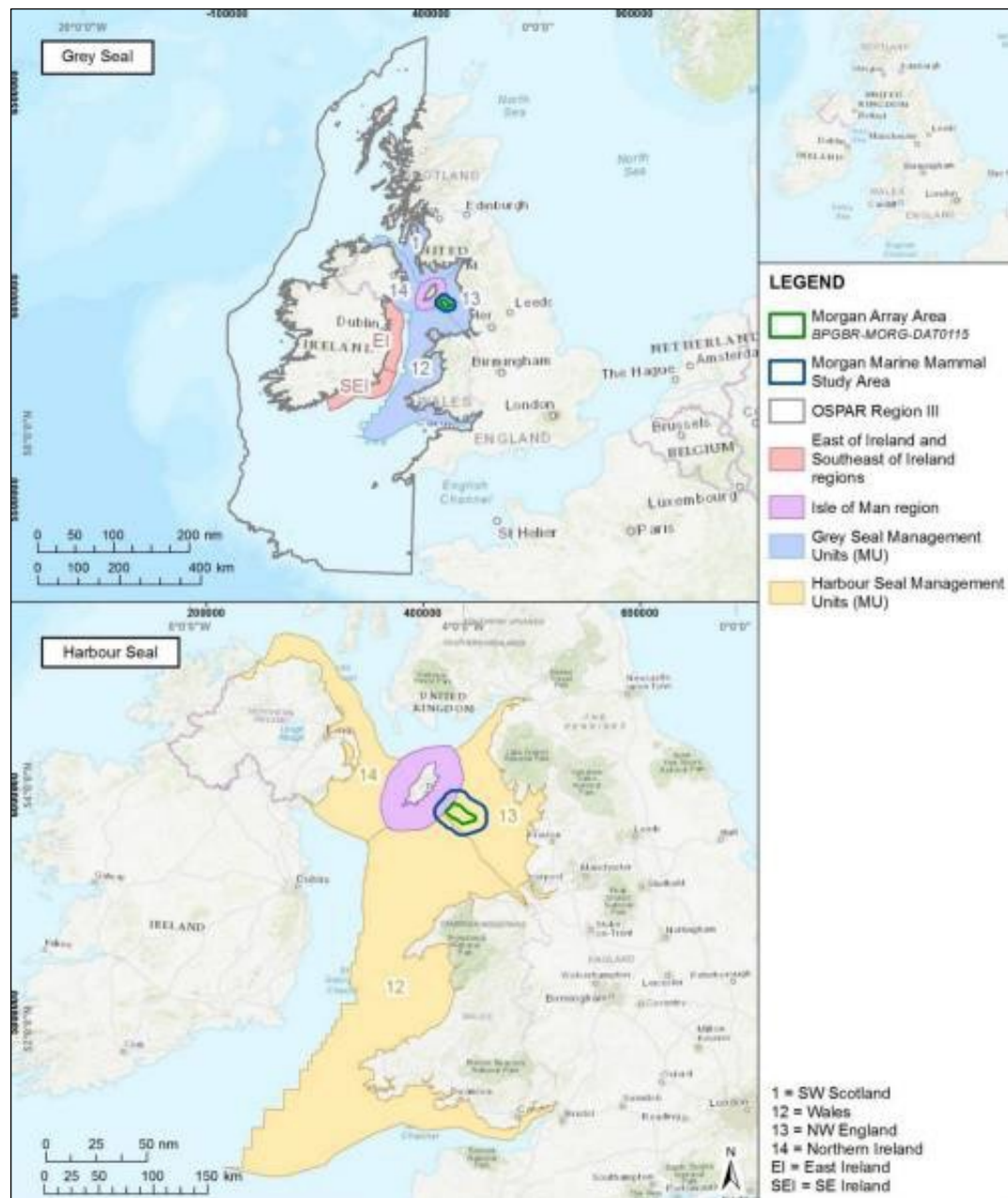
**Figure 19: Marine Mammal Study Area/ Relevant Species MUs for Cetacean Species<sup>22</sup>**



<sup>22</sup> Source: ES Volume 2, Chapter 4, Figure 4.2 [APP-022] – do not scale.



**Figure 20: Marine Mammal Study Area/ Relevant Species MUs for Pinniped Species<sup>23</sup>**



- 3.8.9. Information on marine mammals within the Morgan marine mammal study area was collected through desktop review of existing studies and datasets, site surveys and consultation with the marine mammal EWG. Relevant data that has been collected as part of post-construction ecological monitoring from existing operational offshore wind farms has also been included where appropriate to inform the baseline (and possible impacts).
- 3.8.10. The site-specific surveys indicated that 24 species of cetacean and two species of pinniped were sighted during the survey period. The key species identified in the vicinity of the Morgan Array Area include harbour porpoise, Risso's dolphin, grey seal, harbour seal, bottlenose dolphin and minke whale. Other species reported as known to occur regularly in the region are short-beaked common dolphin but are

<sup>23</sup> Source: ES Volume 2, Chapter 4, Figure 4.3 [APP-022] – do not scale.



largely restricted to south of the Irish Sea. The Applicant also notes that harbour porpoises are present year-round in the Irish Sea with seasonal peaks around Anglesey during winter months, while minke whale can be found throughout the Irish Sea but with higher numbers recorded in summer and autumn, aligning with peaks in herring stocks.

### **Potential Impacts Assessed by the Applicant**

- 3.8.11. The potential impacts assessed in ES Chapter 4 include:
- Injury and disturbance from elevated underwater sound during piling
  - Injury and disturbance from elevated underwater sound during unexploded ordnance (UXO) clearance
  - Injury and disturbance from elevated underwater sound due to vessel use and other (non-piling) sound producing activities
  - Increased likelihood of injury due to collision with vessels
  - Injury and disturbance from elevated underwater sound generated from pre-construction survey sources
  - Underwater sound from wind turbine operation
  - Changes in fish and shellfish communities affecting prey availability
- 3.8.12. The underwater sound modelling methodology and results are presented in full in ES Volume 3, Annex 3.1 – Underwater Sound Technical Report [\[APP-028\]](#). Underwater sound modelling accounted for concurrent piling according to the Maximum Design Scenario (MDS), including parameters for minimum and maximum distances between two concurrent piling events.
- 3.8.13. The impact assessment considers the spatial extent over which potential impacts and potential effects could occur arising from a particular activity within the relevant geographic frame of reference (area of effect and associated number of animals in a marine unit (MU) population affected), how long animals are exposed to an activity that could cause an effect in the context of the life-history of a species (the duration), the frequency of the exposure that could lead to a change (continuous or intermittent) and whether or not the resultant change in either the receiving environment or features exposed is reversible. In addition, the sensitivity of marine mammal receptors has been defined by an assessment of the ability of a receptor to adapt to a given impact, its resilience to that impact and its ability to recover back to pre-impact conditions.
- 3.8.14. Primary and tertiary mitigation measures to reduce potential impacts include:
- Adherence to a Marine Mammal Mitigation Protocol (MMMP) in accordance with the outline document [\[APP-072\]](#) that requires implementation of a piling soft start and ramp-up, sets a maximum separation limit of 15 km and a minimum separation limit of 1.4 km for concurrent piling, as well as sets the limit on maximum hammer energy to be used during piling. Furthermore, the MMMP requires implementation of a mitigation hierarchy with regard to UXO clearance.
  - Development of measures to apply in advance of and during piling activity including the use of:
    - Marine Mammal Observers
    - Passive Acoustic Monitoring
    - Acoustic Deterrent Devices (ADD)
  - Adherence to an Underwater Sound Management Strategy (UWSMS) in accordance with the outline document [\[APP-068\]](#) that includes consideration of

Noise Abatement Systems (NAS) as part of the mitigation options to mitigate for the likelihood of temporary or permanent auditory injury or behavioural impacts to fish and marine mammals.

- Development of and adherence to an Offshore Environmental Management Plan (EMP) with measures to minimise disturbance to marine mammals and rafting birds from transiting vessels, as a minimum requiring vessel crew not to deliberately approach marine mammals, and to avoid abrupt changes in course or speed should marine mammals approach the vessel to bow-ride.

3.8.15. Overall, the Applicant concludes that subject to the implementation of primary and tertiary mitigation measures the significance of effect on marine mammals across all phases of the Proposed Development is no greater than minor adverse for any of the potential impacts assessed, with the exception of the impact of underwater sound on harbour porpoise during UXO clearance. In this instance a moderate significance of effect is concluded for harbour porpoise where standard mitigation measures may not be sufficient to reduce the risk of injury.

3.8.16. The Applicant stated that no marine mammal monitoring is considered necessary to test the predictions made within the impact assessment.

3.8.17. Brief summaries of potential effects in each phase are presented below.

#### ***Construction Phase***

3.8.18. Pile driving during the construction phase of the Proposed Development has the potential to result in elevated levels of underwater sound that are detectable by marine mammals above background levels and could result in auditory injury and/or potential behavioural effects in marine mammal receptors. The scenarios modelled for elevated underwater sound during piling are based on the absolute maximum hammer energies of 4,400 kJ for single piling events and 3,000 kJ for concurrent piling events for the longest possible duration and following a soft start and ramp up.

3.8.19. The maximum spatial effect is predicted for pin piles with a hammer energy of 4,400 kJ. At hammer initiation (first strike) instantaneous injury leading to Permanent Threshold Shift (PTS), based on the peak sound pressure level metric ( $SPL_{pk}$ ), could occur out to a maximum range of 130m across all marine mammal species, with the maximum range predicted for harbour porpoise. However, using the same metric, the maximum range of injury is predicted at 652m at full hammer, although the Applicant reports that this assumes animals do not move away at first strike, which is unlikely. Potential spatial effects are predicted to be smaller for the 3,000 kJ pin piles (for the full hammer energy only), with a maximum range across all species of 515m for full hammer energy and a range of 130m for instantaneous injury at first strike.

3.8.20. When considering cumulative exposure using the  $SEL_{cum}$  metric, the Applicant reports that the threshold is only exceeded for minke whale, with the risk of PTS predicted to occur out to a maximum range of 5,720m during single piling events at a hammer energy of 4,400 kJ. However, modelling of consecutive piling predicted a slightly larger injury range for minke whale of 5,840m, although the Applicant considers that this is unrealistic as it assumes no breaks in piling (for example, breaks between piles or moving from one piling location to another). These ranges are also predicted to reduce to 1,585m and 1,705m respectively with the implementation of 30 minutes of ADD, such that the maximum number of individuals that could be potentially injured is predicted to be no more than one.

- 3.8.21. The reported significance of effect of auditory injury to marine mammals from piling sound is minor adverse for harbour porpoise, dolphin species, minke whale and grey and harbour seals.
- 3.8.22. In terms of behavioural disturbance, the estimated numbers of animals predicted to experience potential disturbance as a result of different piling scenarios is presented in Table 4.28 of ES Chapter 4 [\[APP-022\]](#), which is presented in Table 2 below.

**Table 2: Potential number of animals predicted to be disturbed as a result of different piling scenarios<sup>24</sup>**

| Species                     | Scenario   |                    | Number of Animals | % Reference Population (MU) | Reference Population                       |
|-----------------------------|------------|--------------------|-------------------|-----------------------------|--------------------------------------------|
| Harbour porpoise            | Single     | 4,400kJ            | 858               | 1.37                        | CIS MU                                     |
|                             | Single     | 3,000 kJ           | 713               | 1.14                        |                                            |
|                             | Concurrent | 3,000kJ + 3,000 kJ | 1,007             | 1.61                        |                                            |
| Bottlenose dolphin          | Single     | 4,400kJ            | 4                 | 1.34                        | IS MU                                      |
|                             | Single     | 3,000 kJ           | 4                 | 1.11                        |                                            |
|                             | Concurrent | 3,000kJ + 3,000 kJ | 5                 | 1.57                        |                                            |
| Short-beaked common dolphin | Single     | 4,400kJ            | 2                 | 0.0019                      | CGNS MU                                    |
|                             | Single     | 3,000 kJ           | 2                 | 0.0016                      |                                            |
|                             | Concurrent | 3,000kJ + 3,000 kJ | 3                 | 0.0022                      |                                            |
| Risso's dolphin             | Single     | 4,400kJ            | 103               | 0.84                        |                                            |
|                             | Single     | 3,000 kJ           | 86                | 0.69                        |                                            |
|                             | Concurrent | 3,000kJ + 3,000 kJ | 121               | 0.98                        |                                            |
| Mike whale                  | Single     | 4,400kJ            | 57                | 0.28                        |                                            |
|                             | Single     | 3,000 kJ           | 48                | 0.23                        |                                            |
|                             | Concurrent | 3,000kJ + 3,000 kJ | 67                | 0.33                        |                                            |
| Grey seal                   | Single     | 4,400kJ            | 54                | 0.41/0.09                   | GSPR/OSPAR Region III reference population |
|                             | Single     | 3,000 kJ           | 41                | 0.31/0.07                   |                                            |
|                             | Concurrent | 3,000kJ + 3,000 kJ | 61                | 0.47/0.10                   |                                            |
| Harbour seal                | Single     | 4,400kJ            | <1                | 0.0071                      | HSRP                                       |
|                             | Single     | 3,000 kJ           | <1                | 0.0049                      |                                            |
|                             | Concurrent | 3,000kJ + 3,000 kJ | <1                | 0.0062                      |                                            |

- 3.8.23. The species predicted to be most affected is harbour porpoise, with the Applicant reporting that up to 1,007 animals are predicted to experience potential disturbance from concurrent piling at the western location of the array using dose response modelling, which would equate to 1.61% of the Celtic and Irish Seas (CIS) MU population. Nonetheless, the significance of effect for harbour porpoise and all other marine mammals is reported to be minor adverse, as there is no long-term decline in the regional population predicted, as demonstrated with the Interim Population Consequences of Disturbance modelling assessment.
- 3.8.24. Potential effects of underwater sound from high order UXO clearance on marine mammals includes mortality, physical injury or auditory injury. On the basis that the duration of the impact for each detonation is very short (seconds), the Applicant reports that behavioural effects are considered to be negligible and also reversible, whereby animals are anticipated to fully recover their hearing following cessation of the activity. A significant impact is concluded only for harbour porpoise with the effect reported as moderate adverse on the basis of the absolute maximum high order detonation of 907kg. The PTS auditory injury range for harbour porpoise is predicted to be 15,370m using the SPL<sub>pk</sub> metric, reduced to 8,045m for the most likely 130kg detonation. This could result in 195 harbour porpoises being potentially injured by high order explosion, equating to 0.31% of the CIS MU. For other marine

<sup>24</sup> Source: ES Volume 2, Chapter 2, Table 4.28 [\[APP-022\]](#).

mammals a minor adverse significance of effect is reported, which is not significant in EIA terms.

- 3.8.25. With regard to the impact of sound from vessel movements, the assessment concluded effects of minor adverse significance for all marine mammals for injury and disturbance. The Applicant states a conservative assumption has been made that all individual marine mammals will respond aversively to increases in vessel sound, despite a high ferry baseline in the study area and the likelihood of construction vessels following existing shipping routes. The sound modelling results indicate that the threshold for PTS would not be exceeded for any species for all vessels; the same conclusion is also reached for drilled piling and all cable burial activities. Table 4.43 of ES Chapter 4 [APP-022] shows the estimated disturbance ranges from Morgan construction (non-impulsive sound) activities. Survey vessel and support vessel, crew transfer vessel, scour/ cable protection/ seabed preparation/ installation vessel is predicted to result in the greatest modelled disturbance out to 3,627m for all marine mammal species. However, the Applicant reports that it is unlikely that all mammals will be disturbed to the same extent and that ranges are highly over-precautionary.
- 3.8.26. Construction phase vessels travelling at 7 m/s (or 14 knots) or faster are reported as most likely to cause death or serious injury to marine mammals from increase collision risk. However, ES Chapter 4 notes that vessels involved in the construction phase are likely to be travelling at a speed slower than 14 knots, which is appropriate for species found within the marine mammal study areas, while vessel sound is likely to deter animals from the potential zone of impact. In addition, the Offshore EMP is proposed to outline instructions for vessel behaviour and vessel operators, including advice to operators to not deliberately approach marine mammals and to avoid sudden changes in course or speed. With such measures in place the Applicant predicts that the significance of effect for all marine mammals would be minor adverse.
- 3.8.27. A detailed underwater sound modelling assessment has been carried out to investigate the potential for injurious and behavioural effects on marine mammals as a result of geophysical and geotechnical surveys [APP-028]. It is reported that several sonar type sources will potentially be used for geophysical surveys, including multi-beam echosounder, sidescan sonar, single beam echosounder, sub-bottom profiler (SBP) and sparkers, while for geotechnical surveys, site activities include boreholes, CPTs and vibrocores. The potential PTS ranges for geophysical and geotechnical site investigation surveys are shown in Tables 4.45 and 4.46 of ES Chapter 4 [APP-022] and the estimated number of animals with the potential to experience PTS from these sources is shown in Table 4.47. The maximum PTS is expected to occur out to 254m for harbour porpoise due to SBP (chirp/pinger); however, for all marine mammals the Applicant considers that there is the potential for no more than one animal to experience PTS as a result of geophysical and geotechnical site investigation surveys.
- 3.8.28. In relation to disturbance from geophysical and geotechnical site investigation surveys, the Applicant reports that ranges will be higher than those presented for PTS, with the largest distance over which the disturbance could occur out to approximately 17.3 km for a SBP. However, the Applicant has not quantified the number of animals likely to be disturbed as it considers that there is limited quantitative information available and that any simplified calculation would likely lead to an unrealistic overestimation of the number of animals likely to be disturbed. It considers that the significance of effect would be minor adverse, which is not significant in EIA terms.

- 3.8.29. Habitat loss/ disturbance could potentially affect spawning, nursery or feeding grounds of fish and shellfish receptors, which will impact marine mammals during construction. There is also the potential for underwater sound during construction piling to result in injury and/or disturbance to fish and shellfish communities (notably herring, cod and sandeel), which may lead to effects on minke whale and harbour porpoise prey availability given how tightly tied they are to herring stocks. However, the Applicant reports that whilst herring eggs have higher sensitivity to the smothering effects of increased sediment deposition, and sensitivity of this receptor was deemed to be medium, the magnitude of impact was deemed to be low. Therefore, for all receptors, the predicted effect is minor adverse significance which would not impact marine mammals. Nonetheless, a moderate adverse effect, which is significant in EIA terms is predicted for herring as a result of underwater sound during the construction phase.
- 3.8.30. The Applicant reports that as prey resources are displaced from the areas of potential impact, marine mammals are likely to follow in order to exploit these resources, and that due to the highly mobile nature of marine mammals, there will be similar prey resources available in the wider area. The Applicant concludes that the significance of effect would be minor adverse.

#### ***Operational and Maintenance Phase***

- 3.8.31. The uplift in vessel activity during the operational and maintenance phase is considered to be relatively small in the context of the baseline levels of vessel traffic in the Morgan marine mammal study area, while the number of vessel round trips and their frequency is predicted to be much lower than during construction. Nonetheless, the Applicant reports that the significance of effect from vessel sound and the likelihood of injury due to collision with vessels would remain minor adverse.
- 3.8.32. With regard to sound levels from operating windfarms, the Applicant reports that they are likely to be audible to marine mammals, particularly under scenarios where wind speeds increase as well as the size of the turbine. However, the Applicant considers that it is likely that large amounts of shipping sound present in the vicinity of the Morgan turbines would mask operational wind farm sound. The Applicant reports that conservatively, it is considered that there is a potential that the ability of cetaceans to find their prey may be hindered to some extent within the Morgan Generation Assets due to the potential masking of acoustic cues from large operational wind turbines. However, man-made structures in the marine environment are known to act as artificial reefs, providing structure and habitat for many fish species and attracting small pelagic fish, thus increasing food availability for cetaceans and pinnipeds in the presence of offshore wind farms and attracting marine mammal species. Whilst all marine mammals are deemed to have limited resilience to PTS the significance of effect of auditory injury and behavioural disturbance to marine mammals from operational wind turbine sound is considered to be minor adverse.

#### ***Decommissioning Phase***

- 3.8.33. Vessel use during the decommissioning phase may lead to injury and/ or disturbance to marine mammals. Vessel types which will be required during the decommissioning phase include those used during removal of foundations, cables and cable protection. The Applicant reports that maximum levels of underwater sound during decommissioning would be from underwater cutting required to remove structures, however, this is likely to be much less than pile driving and therefore impacts would be less than as assessed during the construction phase.



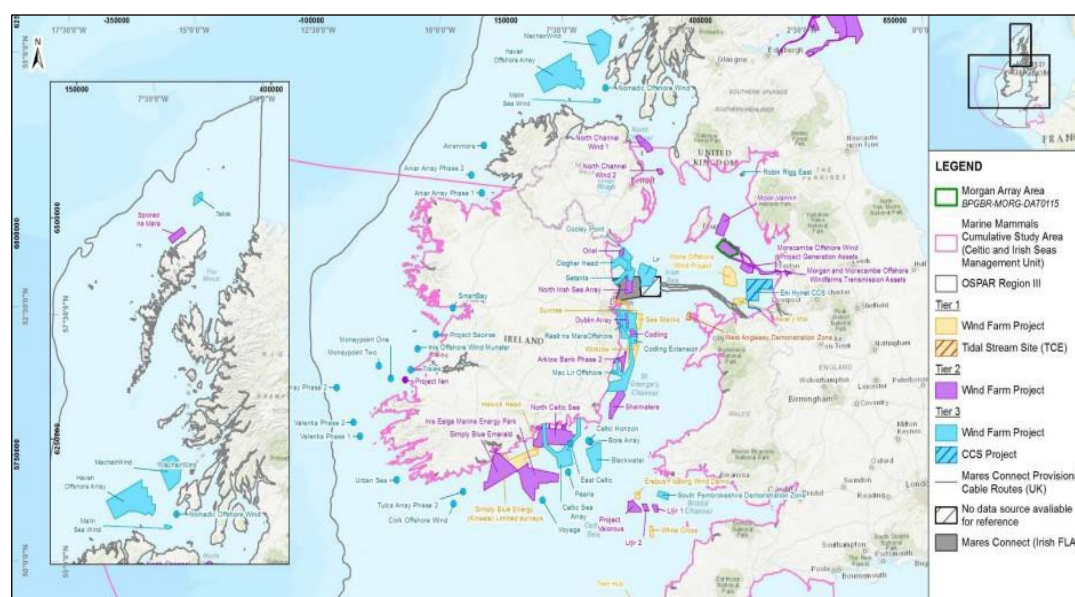
Nonetheless, the Applicant reports that the significance of effect would remain minor adverse, which is not significant in EIA terms.

- 3.8.34. Potential impacts on marine mammal prey species during the decommissioning phase are also considered to be no different to the construction phase, with the Applicant reporting a minor adverse significance of effect.

### Cumulative Impacts

- 3.8.35. The list of other projects, plans and activities considered within the CEA for marine mammals are presented in ES Chapter 4, Table 4.50 [APP-022] and shown illustratively in Figure 21 below. The approach and screening area was agreed with the marine mammal EWG.

**Figure 21: Marine Mammals CEA<sup>25</sup>**



- 3.8.36. Overall, the Applicant concludes that for most impacts there will be no significant cumulative effects from the Morgan Generation Assets alongside other projects/plans, except as a result of behavioural disturbance during piling for bottlenose dolphin within the Irish Sea MU and potential permanent auditory injury from UXO clearance for harbour porpoise, which have a potential significant cumulative effect.
- 3.8.37. The Applicant reports that the cumulative impact of piling at projects across the Irish Sea could result in potential reductions to reproductive success to some bottlenose dolphin individuals in the Irish Sea MU population because disturbance in offshore areas during piling could lead to a longer duration over which individuals may be displaced from key feeding areas and therefore there may be a further reduction in the size of a declining MU population.
- 3.8.38. The assessment of cumulative impact of UXO clearance also concluded that individual harbour porpoise may potentially be exposed to sound levels that could elicit permanent auditory injury. As the project alone assessment determined that there is the potential for a significant effect in EIA terms from UXO clearance, it is

<sup>25</sup> Source: ES Volume 2, Chapter 4, Figure 4.26 [APP-022] – do not scale.

acknowledged this may contribute to a cumulative impact alongside other UXO clearance activities within the cumulative marine mammal study area.

- 3.8.39. The Applicant reports that it is committed to the development of an UWSMS to investigate options to reduce any potential residual effects from the project alone, thereby also reducing potential cumulative significant impacts to a non-significant level.

## **ISSUES CONSIDERED DURING THE EXAMINATION**

- 3.8.40. The main organisations with an interest in marine mammals that were involved in the Examination were the Marine Management Organisation (MMO), Natural England, Natural Resources Wales (NRW) and the Joint Nature Conservation Committee (JNCC). At the outset of the Examination Natural England advised the ExA that it would only attend hearings by exception [\[PD1-020\]](#) and that it would be unlikely to respond directly to commentary on its representations. In addition, it also advised that due to resource constraints it would not be providing full marine mammal advice or updating its Risk and Issues Log for marine mammals for the Examination [\[REP1-052\]](#). The MMO [\[PD1-018\]](#) and NRW [\[PD1-021\]](#) similarly advised that they would not be attending any issue specific hearings.
- 3.8.41. As a result, the Examination into impacts on marine mammals was primarily undertaken through written questions and answers, although the Applicant was able to provide some oral clarifications and updates at issue specific hearings (ISH). The ExA issued 23 mammal related questions in first written questions (ExQ1) [\[PD-004\]](#) and 13 in second written questions (ExQ2) [\[PD-009\]](#). The MMO, Natural England and NRW made submissions at each deadline. Some matters were resolved early and satisfactorily, for example confirmation on the basis for determining the piling hammer energies and their inclusion in the design parameters of the draft Development Consent Order (DCO), as well as marine mammal sensitivity and prey availability. However, several issues persisted throughout the Examination, and these will be considered in more detail in this section of the Report:
- Noise Impacts from Piling
  - Unexploded Ordnance Clearance
  - Injury and disturbance to marine mammals from construction and maintenance vessels
  - Scope and Suitability of Monitoring

### **Noise Impacts from Piling**

- 3.8.42. There was generally no disagreement on the levels of significance concluded for impacts from underwater sound from piling in the marine mammals assessment, but one exception was Natural England's position on the Applicant's conclusion of negligible magnitude for injury and disturbance to harbour porpoise [\[RR-026\]](#), [\[AS-016\]](#). Natural England noted that the magnitude had been downgraded in the ES from low to negligible since the Preliminary Environmental Information Report (PEIR), yet it had originally advised the Applicant that the magnitude should be medium as the impact of piling activity would lead to permanent effects on individuals.
- 3.8.43. Natural England considered that the Applicant had an over-reliance in the assessment on Acoustic Deterrent Devices (ADDs) as a key mitigation tool to prevent injury, yet the impact of additional noise produced by ADDs had seemingly not been factored into the assessment. Natural England also noted that the purpose of ADDs is to encourage animals to leave the area of impact before the

commencement of activity, not to reduce the impact of the sound itself. In order to reduce the noise at source, NAS needed to be employed. The MMO supported Natural England's recommendation.

- 3.8.44. Natural England further questioned the Applicant on its reference material and suggested that the Applicant had ignored a study by [Yang et al \(2021\)](#) which detailed potential impacts on cetaceans through high or cumulative noise exposure, such that Natural England could not agree with the conclusion that there would be no residual risk of injury to harbour porpoises or that there would be no significant disturbance, and as such the magnitude of negligible was not precautionary enough [\[RR-026\]](#).
- 3.8.45. NRW also raised concerns regarding large scale use of ADDs and aggregate noise exposure effects [\[RR-027\]](#), [\[REP1-056\]](#), however, it confirmed that it did not believe it was necessary for the Applicant to assess separately the effects of ADDs given that proportionate application of ADD use would be considered post consent.
- 3.8.46. Nonetheless, the concerns led the ExA to ask the Applicant why it was reluctant to commit to the deployment of NAS and to comment on the assessment of sound impacts associated with ADDs, to comment on the Yang study, and to clarify why it had not carried out an assessment of the potential effects of aggregate exposure (ExQ1 MM 1.4, ExQ1 MM 1.10 and ExQ1 MM 1.18 [\[PD-004\]](#)).
- 3.8.47. The Applicant stated that the magnitude assigned for mammal injury reflected the removal of monopiles and the reduction in the number of turbines from the proposed development since consultation on the PEIR, and also relied on tertiary mitigation measures, such as ADDs, without which PTS could affect a small number of animals at an individual level but unlikely to affect the wider population [\[PD1-017\]](#).
- 3.8.48. The Applicant acknowledged [\[PD1-017\]](#), [\[REP3-006\]](#) that ADDs were not assessed separately in the Application for disturbance to marine mammals but that they were factored into the assessment for injury, as demonstrated in Tables 4.25 and 4.26 of ES Chapter 4 [\[APP-022\]](#). The Applicant explained that the purpose of ADDs is to encourage animals to leave the piling impact zone before piling activities commence and whilst the ADDs generate a sound that causes a disturbance response in marine mammals, that sound is at a much lower level than piling activities.
- 3.8.49. It was reported in paragraph 4.9.2.34 of ES Chapter 4 that for all species except minke whale, use of an ADD for 30 minutes prior to commencement of piling of pin piles would reduce the likelihood of PTS occurring as sound levels are predicted not to be greater than the relevant threshold values, during single, concurrent and consecutive piling for all species. For minke whale specifically the Applicant reported that the maximum number of individuals that could be potentially injured is no more than one animal with the use of ADDs and up to two animals without ADDs, although there are no designated sites for minke whale in the vicinity and no minke whale were recorded during the 24 months of site-specific aerial surveys in the Morgan Aerial Survey Area.
- 3.8.50. With regard to NAS, the Applicant stated several times throughout the Examination [\[REP3-006\]](#), [\[EV5-010\]](#) that it would consider using NAS if necessary but that the deployment of NAS was not standard industry practice within the UK and there was no statutory requirement for NAS to be deployed. It added that the Proposed Development is not within an area that is more sensitive for marine mammals in comparison to many previous offshore wind projects, and as it was not proposing construction techniques that resulted in significantly higher underwater sound levels

than other projects (clarifying that the maximum hammer energy was lower than many recent consents), it would be inappropriate to apply a blanket requirement, when the final design parameters and construction programme may not require the implementation of additional mitigation measures. In addition, it was pointed out that the deployment of NAS has significant cost, implementation, supply chain and programme implications and therefore the decision could not be made lightly.

- 3.8.51. The Applicant also clarified [\[REP3-006\]](#) that it had considered the Yang study and while it acknowledged that long term effect of stress caused by noise could lead to effect on the individual harbour porpoise, there were also multiple other studies that concurred that recovery to pre-exposure baselines from various sound sources (including piling) was in the order of magnitude of up to a few hours.
- 3.8.52. Natural England maintained its objection to the Applicant's assigned magnitude for injury and disturbance to harbour porpoise in its final Risk and Issues Log (C2/C12 and C3/C13) [\[AS-016\]](#), but in light of the Applicant's late commitment to using NAS to mitigate piling noise (see earlier discussion on this in section 3.7 of this Report), Natural England downgraded the issue to yellow in its log, which meant that disagreement remained but was unlikely to make a material difference to the outcome.
- 3.8.53. The Applicant also responded to NRW's concerns regarding aggregate effects in [\[PD1-009\]](#), [\[REP2-005\]](#), [\[REP3-006\]](#). NRW confirmed in its D2 statement of common ground (SoCG) [\[REP2-026\]](#) (NRW.MM.16) that the Applicant's findings in its interrelated effects submission (Annex 3.4, [\[PD1-009\]](#)) was satisfactory. Nonetheless, the ExA posed a further question to the Applicant on aggregate exposure as it was not convinced that the potential effects had been fully explained (ExQ2 MM 2.6 [\[PD-009\]](#)).
- 3.8.54. The Applicant's response [\[REP5-015\]](#) reiterated the findings of section 4.13 of ES Chapter 4 and ES Chapter 15 on Inter-related Effects [\[APP-019\]](#) and stated that the level of significance concluded for the project alone and cumulatively would not be greater even when considering the potential for inter-related effects over the lifetime of the project including aggregated exposure. The Applicant also reiterated the conclusions of its interrelated effects submission (Annex 3.4, [\[PD1-009\]](#)) that there are several different impacts associated with the Proposed Development that could lead to elevated subsea sound (for example piling, UXO clearance, site investigation surveys, vessel use and other (non-piling) sound producing activities) but marine mammals are likely to quickly recover from aggregate exposure and return to the impacted area.
- 3.8.55. The D6 NRW SoCG [\[REP6-083\]](#) stated that for piling effects while a significant cumulative effect on bottlenose dolphin is predicted, such effects are likely to be mitigated to an acceptable level through measures in a final USWMS. In addition, NRW also agreed that in terms of inter-related and aggregate effects, given the mitigation measures planned, including development of the MMMP and UWSMS, it anticipated being able to agree with the overall conclusion in ES Chapter 4 [\[AS-010\]](#) and [\[PD1-009\]](#).
- 3.8.56. The MMO noted that obtaining measurements of underwater sound generated by the first four piled foundations of each piled foundation type was standard practice for offshore windfarm developments and that this measure was included in the draft DCO at condition 28 of the deemed marine licences (DMLs) in schedules 3 and 4. Nonetheless, the MMO requested [\[REP4-041\]](#) that measurements captured in the draft DCO should include the worst-case scenario piles (those where hammer



energies are greater than 3,000kJ). This request was pursued through ExQ2 MM 2.5 [PD-009] and the Applicant introduced new monitoring requirements for piling in response in its In-Principle Monitoring Plan [REP6-053], its Commitments Register [REP6-051] and its draft DCO [REP7-007]. The MMO confirmed it was content with the updates and considered the matter closed.

### ***ExA considerations on noise impacts from piling***

- 3.8.57. From an Environmental Impact Assessment (EIA) perspective, the final SoCGs with NRW and the MMO and Natural England's final Principal Areas of Disagreement Summary Statement (PADSS) and final Risk and Issues Log indicate a good level of agreement with the Applicant's marine mammal assessment methodology and conclusions, including for cumulative impacts from underwater noise from piling. Whilst Natural England maintained its disagreement with the Applicant over the ascribed level of magnitude for harbour porpoise, it is reassuring for the ExA that Natural England was able to accept that noise impacts from piling are likely to be able to be mitigated to a non-significant level once noise mitigation measures (specifically including NAS) are agreed and implemented through the final MMMP and UWSMS.
- 3.8.58. The inclusion of additional monitoring measures with adaptive management for piled foundations in condition 28 of the draft DMLs to capture the worst case scenario for piling hammer energies is also a welcomed amendment to a standard condition. R2(5) of the draft DCO also details the maximum hammer energies that could be used.
- 3.8.59. Overall, the ExA has no basis to find that the Applicant's assessment of piling noise is inadequate in terms of methodology, the conclusions or the mitigation and since it has not been demonstrated that the construction piling monitoring commitments are deficient, it follows that monitoring measures commensurate with the scale and nature of the potential residual impacts on marine mammals identified in ES Chapter 4 have been sufficiently secured.

### **Unexploded Ordnance Clearance Inclusion and Impacts**

- 3.8.60. There was disagreement from the outset over the inclusion of UXO clearance in the DMLs with the MMO and Natural England [REP1-048], [RR-026] arguing that a separate licence should be sought due to the lack of information on the size and location of the UXOs and thus the impacts and mitigation measures required. The JNCC submitted a similar position into the Examination at D3 [REP3-035]. The Applicant's position [PD1-017] was that the environmental assessment covered a range of UXOs likely to be encountered within the array area and that the MMMP and UWSMS, which would be developed in consultation with key stakeholders, would provide suitable measures to mitigate for high order clearance of any UXO size encountered, including consideration of NAS for UXOs larger than 130 kg.
- 3.8.61. The MMO stated that NAS (bubble curtain) would be required for all high order clearance, regardless of UXO size and that this should be clear in the MMMP and UWSMS [REP2-029], [REP3-037], [REP4-041]. As with the piling issue reported above and in section 3.7 of this Report, the Applicant's replies were consistently that it had made a commitment to considering the use of NAS as part of further mitigation options in the UWSMS if required (i.e. if there remained a residual significant effect even with the inclusion of primary and tertiary measures adopted).
- 3.8.62. In terms of licensing, the ExA specifically asked the Applicant to justify UXO inclusion in the draft DMLs (ExQ1 DCO 1.12 [PD-004]). The Applicant argued that



the consenting process under the Planning Act 2008 (PA2008) facilitates the inclusion of a range of different consents within the same order, with a view to streamlining the process for NSIPs. It added that removing the need to obtain separate consents, and the potential delay that could cause, ultimately supports the Applicant's objective of commencing construction in 2026 and its contribution to the UK government's renewable energy targets [\[REP3-006\]](#). The Applicant repeated this position at ISH2 [\[EV5-012\]](#), [\[REP4-006\]](#) highlighting that consideration of UXO clearance in applications had been driven by a request from the MMO over the last decade (as it was deemed a reasonably foreseeable activity) and the industry had moved to align itself with that request. It added that including UXO clearance in the DMLs was the next logical step and that any information required to support a licence application had been included in the environmental assessment.

- 3.8.63. The MMO in its written representation stated that if the SoS is minded to retain UXO clearance in the DMLs then the maximum number of UXOs to be cleared should be included within the DMLs. The MMO noted 13 UXOs had been mentioned as a likely scenario in the UWSMS but sought clarification [\[REP1-048\]](#). The Applicant initially considered it unnecessary to specify the number and size of UXOs that could be cleared in the terms of the DMLs due to the lack of survey data [\[REP2-005\]](#), although it did confirm that a conservative estimate of 13 UXO clearance events had been used for the purpose of the assessment of effects. The Applicant initially considered that the requirements in conditions 22 and 23 of the draft DMLs to require submission of a method statement for UXO clearance, a MMMP and an UWSMS to be approved in writing by the MMO in consultation with the relevant statutory nature conservation body before any clearances could take place to be suitable controls. Nonetheless, the Applicant subsequently amended condition 23(6) of the draft DMLs at D3 to include the maximum number of UXO clearances (13) [\[REP3-014\]](#), tracked version].
- 3.8.64. At D4, Natural England reiterated its objection to UXO clearance inclusion in the DMLs [\[REP4-042\]](#). It drew the ExA's attention to a submission by the JNCC at deadline 5 of the Mona Offshore Wind Farm examination which set out a detailed explanation of why UXO clearance should not be authorised within the DCO but instead under a standalone Marine Licence post-consent. Natural England stated it was fully aligned with the advice provided by the JNCC for the Mona examination and considered the same advice to be applicable to the Morgan Examination. The JNCC subsequently submitted a copy of its Mona submission into the Morgan Examination<sup>26</sup> advising that it was also of relevance to the Morgan Examination [\[REP5-060\]](#). That submission noted that the JNCC had undertaken a review of DCOs consented between 2010 and 2022 and only two included UXO clearance: East Anglia One North Wind Farm and East Anglia Two. The JNCC acknowledged that measures in the PA2008 were designed to remove a need for NSIPs to obtain multiple consents from various authorities but the inclusion of UXO clearance in DCOs was not standard practice and was not in line with current policies.
- 3.8.65. Natural England also noted that one of the mitigation measures which the Applicant was considering in the MMMP for UXO clearance was scare charges, which they did not support. They requested scare charges be removed from the MMMP [\[RR-026\]](#). However, the Applicant considered that the judicial use of scare charges to deter animals over large distances would be preferable to the risk of injury to marine mammal receptors.

---

<sup>26</sup> JNCC Submission into the Mona Examination ([\[REP5-096\]](#))

- 3.8.66. Scare charges remained in the outline MMMP throughout the Examination but at D5 the Applicant removed high order clearance from the DMLs [REP5-018, tracked version]. This shift was in response to the submissions of the JNCC and the publication of new marine noise policy<sup>27</sup> and a joint position statement on UXO clearance<sup>28</sup> on 21 January 2025. The policy and guidance identified that high order detonations for UXO clearance could result in considerable injury and disturbance to marine species from the associated noise (as well as seabed damage) and as a result low order methods should now be the default method of clearance of any type of UXO in the marine environment. This was discussed briefly at ISH3 [EV6-007] and the Applicant submitted a policy compliance statement at D6 [REP6-011]. The Applicant subsequently made further changes to MMMP, UWSMS and condition 23 of the DMLs to commit to compliance with the new policy [REP6-047], [REP6-045], [REP7-007]. The revised MMMP clarified that scare charges would only be considered for high order clearance for which a separate marine licence would be required.
- 3.8.67. The MMO and Natural England expressed some satisfaction that high order clearance had been removed, but they did not accept retention of low order UXO clearance in the DCO [REP6-094], [AS-015]. However, the MMO in its final SoCG with the Applicant stated that should the SoS decide that low order UXO clearance remains within the DML, the MMO would be able to manage the mitigation and impacts post consent and that sufficient information had been provided by the Applicant [REP6-081].

***ExA considerations on UXO clearance inclusion and impacts***

- 3.8.68. Mechanisms for the control of underwater noise, including the substance of draft mitigation plans and the wording of DML conditions required to secure marine mammal mitigation, were key themes throughout the Examination of this topic. The ExA has carefully considered the arguments for and against the Applicant's approach of including UXO clearance within the DMLs and the objections of the MMO, Natural England and the JNCC are understood. However, the ExA considers that the strength of those objections reduced following publication of the new marine noise policies and guidance and the Applicant's decision to remove high order clearance from the DMLs in line with that.
- 3.8.69. The ExA notes that this is not the first instance of an NSIP including UXO clearance in a made DCO. The retention therefore of low order clearance in the final DCO would not be inconsistent with the recent East Anglia orders. While the marine noise policy environment has changed since those two orders were made, and thus it could be argued that those decisions should not be followed, the new marine noise policy and associated guidance state that low order clearance methods are considered to be safer, commercially available and would cause less environmental harm. With that in mind, the inclusion of low order clearance in the Morgan DCO would still not be at odds with the two most recent East Anglia orders.
- 3.8.70. The ExA is also persuaded by the Applicant's argument about streamlining consents and licences for the delivery of NSIPs. The ExA agrees that removing the need to apply for one or more separate marine licences in the post consent stage has the potential to shorten and simplify the pre-construction period. The final approvals on UXO clearance activities would also still rest with the MMO through

---

<sup>27</sup> DEFRA: [Reducing Marine Noise](#), Published 21 January 2025

<sup>28</sup> JNCC *et al.*: [Marine Environment: Unexploded Ordnance Clearance Joint Position Statement](#), Published 21 January 2025

the terms of conditions 22 and 23 of the DMLs so further checks and balances will take place. Condition 23, which relates solely to low order UXO clearance, requires the submission of a method statement and a refined MMMP for approval by the MMO at least six months before any clearance activities can take place. Condition 22 also requires the submission for approval of a refined UWSMS.

- 3.8.71. With regard to the current drafting of condition 22 [\[REP7-007\]](#), the ExA remains concerned that low order UXO clearance is not referred to in sub-paragraph (2), which requires details to be submitted as part of the UWSMS of noise mitigation systems and/ or noise abatement systems to manage sound. This sub-paragraph in the DMLs is seemingly confined to piling activities only. The ExA is mindful that the MMO's recommended draft condition 22 [\[REP6-094\]](#) also excluded reference to UXO clearance in sub-paragraph (2) and this is presumably because both the Applicant and the MMO consider that noise mitigation systems and/ or noise abatement systems will not be required for low order clearances.
- 3.8.72. Nonetheless, the ExA notes that the JNCC guidance for minimising risk of injury to marine mammals from UXO clearance<sup>29</sup> states that while it is anticipated that injury ranges when using the low order method of clearance will be sufficiently small such that they can be effectively mitigated using visual observers, passive acoustic monitoring and ADDs, if predicted injury zones in the impact assessment are greater than can be mitigated using those methods, alternative noise abatement systems should be considered.
- 3.8.73. The ExA notes that in ES Chapter 4 (paragraph 4.9.3.15 [\[APP-022\]](#)) it is stated that the injury ranges (for both low order and high order clearance) are considerably larger than the standard 1 km mitigation zone recommended for UXO clearance and there are often difficulties detecting marine mammals (particularly harbour porpoise) over such large ranges. With that in mind, the ExA considers that condition 22(2) needs to be amended as follows, to include low order UXO clearance as a precautionary measure:

*22(2) The underwater sound management strategy submitted under sub-paragraph (1) must include details of the noise mitigation systems and/or noise abatement system that will be utilised to manage sound from driven or part-driven piling activities (or low order UXO clearance unless otherwise agreed in writing by the MMO).*

- 3.8.74. This revision is reflected in the ExA's recommended DCO (see Table 11 in [Chapter 6](#) of this Report). With this revision to condition 22 and in light of the requirements in condition 23, the ExA is content that the MMO's subsequent decisions on the UXO method statement, the MMMP and the UWSMS will adequately secure the necessary controls and noise mitigation measures to ensure that UXO clearance activities are undertaken in a way that minimises injury and disturbance effects on marine mammals.

#### **Injury and disturbance to marine mammals from construction and maintenance vessels**

- 3.8.75. The impact of noise from increased vessel movements during the construction phase, particularly on harbour porpoise, was highlighted as a matter of concern for

---

<sup>29</sup> JNCC *et al.*: [Minimising the risk of injury to marine mammals from unexploded ordnance \(UXO\) clearance in the marine environment](#), Published January 2025

NRW in its relevant representation [\[RR-027\]](#), and Natural England in its Risk and Issues Log (C15) [\[RR-026\]](#). Both IPs particularly objected to the estimated number of animals disturbed by vessels being based on the impact radii of static vessels. Given that vessels would be expected to move location, the IPs considered that estimating numbers based on static radii may lead to both underestimates of daily numbers disturbed and an underestimate of the overall daily area ensonified.

- 3.8.76. In addition, Natural England stated that considering that the tolerance threshold levels of harbour porpoises to vessel disturbance were not known, the Applicant could not claim that because of the existing levels of vessel activity in the Morgan shipping and navigation study area that marine mammals could tolerate the effects of additional vessel disturbance. Both IPs considered that there was inadequate justification for an overall assigned magnitude score of low and that the assessment should be revised.
- 3.8.77. In response to this the Applicant submitted Annex 3.5: Impacts on Marine Mammals and Elevated Underwater Sound Due to Vessel Use [\[PD1-010\]](#). This included more evidence (extended literature review) on the co-existence of harbour porpoise with vessels in close proximity and recovery times after exposure/ reaction/ avoidance once vessels have passed. The Applicant maintained that its assessment was a precautionary one given that the ranges it had used from the literature were greater than those evidenced in the underwater sound modelling, such that the overall conclusion of low magnitude was reliable.
- 3.8.78. NRW acknowledged that it was unrealistic to assess injury and disturbance from vessel use by presenting a sum of the impact ranges of all vessels because the level of detail necessary to assess the trips of over 2000 vessels of different size and function for the project alone would be impractical and disproportionate in terms of the time required [\[REP1-056\]](#). Nonetheless, it maintained that a static radii assessment was inadequate and reiterated advice that it said it gave at the PEIR stage, which was to follow the approach taken for the [Wylfa Newydd project](#), which considered disturbance based on the travel paths of vessels used by the Proposed Development. NRW noted that this method would involve assuming that all vessels involved in the construction, operation, and decommissioning phases travel along the same track from port to their required location, which for simplicity, could be taken to be the centre of the array. A value from the literature could then be used as an impact radius on either side of the track to allow calculation of an estimated area (and estimated numbers) ensonified on a daily basis. The ExA pursued this request with the Applicant in ExQ1 MM 1.17 [\[PD-004\]](#).
- 3.8.79. The Applicant advised it had reviewed the Wylfa Newydd assessment but considered that the approach taken in Morgan employed more conservative impact ranges and more up to date behavioural thresholds. The Applicant also considered that the marine mammal assessment in ES Chapter 4 had gone above and beyond previously accepted DCO applications such as Awel y Môr Offshore Wind Farm, which if constructed would be closer than Morgan to the North Anglesey Marine SAC for which harbour porpoise are a feature, and that further calculations would not change the outcome of the assessment [\[REP2-005\]](#), [\[REP3-006\]](#), [\[REP4-009\]](#). Nevertheless, the Applicant did provide a modified assessment in [\[REP4-009\]](#) which illustrated that fewer animals would be disturbed if applying a modelled impact range of 3.627 km (as suggested by NRW) in comparison to the 7 km behavioural impact radius presented in the ES.
- 3.8.80. NRW continued to dispute the Applicant's methodology [\[REP3-050\]](#), [\[REP5-083\]](#), [\[REP5-089\]](#) but it clarified that the divergence of opinion on how best to calculate

the numbers of animals disturbed did not materially impact its agreement with the overall conclusions that there would be no significant adverse effect on marine mammals due to the mitigation methods that would be employed, namely an Offshore Environmental Management Plan (EMP) which would include measures to minimise disturbance to marine mammals (and rafting birds) from transiting vessels. Nonetheless, NRW still felt that it was inaccurate of the Applicant to state that *“0.017% of the harbour porpoise MU will be disturbed”* (for a 3.627 km impact radius) without clarifying that this was a precautionary estimate for a fixed point in time for a single vessel and not a total.

- 3.8.81. The matter was briefly discussed with the Applicant at ISH3 [EV6-007], [EV6-011] and both the Applicant and NRW subsequently agreed in the final SoCG [REP6-083] that a single point in time was an appropriate representation of the assessment methodology and the Applicant updated ES Chapter 4 [REP6-031] to reflect this. Furthermore, NRW confirmed that it welcomed the mitigation measures outlined in Document J15 (subsequently relabelled as S\_D5\_23 at D5 - [REP5-046]): Measures to minimise disturbance to marine mammals and rafting birds. Natural England did not pursue the matter after D3 when it turned the matter yellow in its Risk and Issues Log [REP3-049], suggesting that it maintained its disagreement but that it was unlikely to make a material difference to the outcome of the decision making process.

***ExA considerations on injury and disturbance to marine mammals from construction and maintenance vessels***

- 3.8.82. Whilst this matter was resolved at the end of the Examination with NRW accepting that there would be no significant adverse effect on marine mammals from construction vessels and Natural England conceding that a reassessment would be unlikely to materially alter the outcome, the ExA is concerned generally that there is no accepted methodological approach to assessing the impacts on marine mammals from vessels. NRW put forward several options during Examination supported by literature and the Applicant countered those with different perspectives on the literature.
- 3.8.83. This is not a matter that the ExA can readily resolve but it is incumbent on the SNCBs to be clear during the pre-examination/ PEIR stage and for Applicants to follow the advice unless there is an agreed reason for not doing so. This could avoid the time and effort for all parties re-considering a matter that could have been previously settled.
- 3.8.84. Nonetheless, the ExA is content that although the Applicant’s assessment was based on a fixed impact radius and only provided a snapshot estimate of numbers of animals disturbed at one point in time, it would have been unrealistic for the Applicant to assess injury and disturbance from vessel use by presenting a sum of the impact ranges of all vessels within each offshore wind farm under construction.

**Scope and Suitability of Monitoring**

- 3.8.85. Another core theme of the Examination related to monitoring marine mammal effects. Natural England noted early in the Examination [RR-026] that the Applicant had not proposed monitoring for marine mammals within the Mitigation and Monitoring Schedule document or the Offshore In-Principle Monitoring Plan (IPMP). Natural England stated that it did not agree that because no significant impacts were predicted, no monitoring was required, and it insisted throughout the Examination that marine mammal monitoring should be undertaken in addition to the standard monitoring of underwater noise generated from the piling of the first



four piles. Natural England advised that the Applicant should compile an in-principle monitoring plan for marine mammals, in accordance with their best practice advice.

- 3.8.86. The Applicant's response [REP2-005] was that it had not proposed monitoring for marine mammals, on the basis that with the implementation of adopted measures, the risk of injury could be fully mitigated and that the effect of disturbance, for all impacts, was concluded to be not significant in EIA terms. Further, in response to ExQ1 GEN 1.8 [PD-004] the Applicant also stated [REP3-006] that its approach to monitoring had been informed by MMO guidance (2014) which states that monitoring should be focused on where there is the potential for a residual significant effect and ensuring the monitoring is appropriate, proportionate and achievable. Moreover, the Applicant stated that the detail set out in the outline IPMP was commensurate with the level of detail provided for in a number of recent NSIPs, including Hornsea Four, Hornsea Three, East Anglia One North, East Anglia Two, Norfolk Boreas and Norfolk Vanguard. The Applicant also highlighted that NRW had confirmed for the Mona Offshore Wind Farm that marine mammal monitoring was not necessary in view of the commitment to an UWSMS and was not required for Awel y Môr even though that project had predicted a larger magnitude effect on bottlenose dolphin [REP3-006], [REP4-009].
- 3.8.87. Natural England maintained its position that monitoring commitments for marine mammals remained a significant issue and suggested the Applicant focus on filling evidence gaps for marine mammals in the Irish Sea, with a focus on receptors which were not usually the subject of post-construction monitoring [REP3-047]. The ExA requested Natural England to provide an example of a DCO/DML in which the level of monitoring it sought for the Proposed Development was specified and to justify why it should be implemented in this case (ExQ2 MM 2.2 [PD-009]). Natural England advised that there was a need for monitoring to fill the knowledge gap on the impact of SBP surveys on harbour porpoises, such that monitoring should be considered with the aim to collect data before, during and after SBP surveys to examine changes in the baseline [REP4-043], [REP5-080]. Natural England also advised that it would be happy to consider visual monitoring (using 'big eyes') as a sufficient way of monitoring the impact of SBP surveys on harbour porpoise [REP6-105].
- 3.8.88. The Applicant argued that the inclusion of monitoring of behavioural responses to SBPs in the IPMP would be disproportionate to the risk, highlighting also that the site-investigation surveys at the Morgan Generation Assets were not a licensable activity and that there was no precedent for undertaking monitoring of SBP surveys for any other site investigation surveys (in relation to any type of offshore project) [REP5-015], [REP5-009]. The Applicant also submitted a clarification note [REP6-009] to demonstrate that there was no potential for significant effects as a result of site investigation survey sources (including SBPs). The closing position of Natural England was that it was in an agree to disagree position regarding marine mammal monitoring [AS-015]. The MMO in its closing statement advised that inclusion of monitoring of SBP surveys in the IPMP was not required as they are low risk activities and exempted from licensing [REP6-094].
- 3.8.89. The MMO further acknowledged the Applicant's reliance on its 2014 monitoring guidance but advised there was an ongoing project on standardising monitoring data, and was looking at the potential to include updates within the monitoring condition or plan to ensure all windfarms would abide by the agreed standardised requirements. The Applicant made an amendment to the IPMP to specifically state that it would give consideration to the MMO's Standardisation of Offshore Wind Post-Consent Monitoring, to ensure that any standards or best practice are adhered

to [\[REP6-053\]](#). The MMO confirmed its satisfaction with this amendment [\[REP6-094\]](#).

- 3.8.90. Throughout the Examination the MMO maintained its stance on the need for the DMLs to include adaptive management conditions [\[RR-020\]](#), [\[REP2-029\]](#), [\[REP6-094\]](#) and recorded the status of the matter as not agreed – material impact in its final SoCG with the Applicant [\[REP6-081\]](#). Specifically, the MMO required additional sub-paragraphs to be added to condition 29 of the draft DMLs to allow the applicant to provide potential solutions when reviewing the results of monitoring.
- 3.8.91. The MMO asserted that the additional conditions would ensure that all parties are clear what is required if the monitoring shows higher impacts than predicted during the assessment stage. Natural England made similar representations around adaptive management (see G3 in its Risk and Issues Log [\[AS-016\]](#)). The ExA also explored this matter in ExQ2 GEN 2.9 [\[PD-009\]](#).
- 3.8.92. The Applicant noted that a similar condition was included within the recently granted Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024 following a recommendation by the Examining Authority on that application. However, the Applicant added that that recommendation related specifically to concerns raised about the impact of that project on sensitive habitats and species. As the Environmental Statement for the Morgan Proposed Development had not identified any likely significant environmental effects that would require ecological post construction monitoring or a need for potential adaptive management beyond that already included in condition 29, the Applicant did not consider any amendment to condition 29 to be necessary.
- 3.8.93. The Applicant made further submissions [\[REP5-010\]](#) that the predicted impacts from Morgan Generation Assets (based on a reasonable worst case scenario) were some of the lowest of any offshore wind farm of this size (Round 3 and Round 4) and that provision of a blanket adaptive management commitment for effects that have the potential of only minor or negligible significance was not warranted and would be disproportionate in terms of time and cost and without clear rationale and objectives. The Applicant added that it had committed to adaptive measures within the IPMP where it was appropriate and capable of delivering tangible benefit.
- 3.8.94. The MMO advised that its recommended conditions were not blanket adaptive management for every impact identified but specifically linked to the agreed monitoring being undertaken. It stated that if impacts turn out to be higher than predicted it could utilise Section 72 of the 2009 Marine and Coastal Access Act (MCAA) and vary the marine licence to request adaptive management, but an amended condition 29 would provide a clear process to all and allows for proactive management rather than reactive management by the MMO [\[REP6-094\]](#). The Applicant's closing position was that it had detailed throughout the IPMP [\[REP6-053\]](#) and the Commitments Register [\[REP6-051\]](#) where the monitoring proposed would be adaptive in its nature and/ or have an adaptive management element associated with it, and noted both of those documents were secured within the DCO.

***ExA considerations on the scope and suitability of monitoring***

- 3.8.95. The ExA considers that the Applicant's approach to monitoring is in line with offshore wind industry best practice, in particular that offshore wind monitoring requirements are driven by consideration of uncertainty and significance, and that any monitoring requirements are proportionate, consistent and appropriately

targeted. The Applicant has committed to amongst other things carrying out monitoring of sandwave recovery, presence of invasive non-native species, colonisation of gravity base foundations, scallop recovery, and specifically in relation to marine mammals, underwater sound monitoring during pile installation.

- 3.8.96. The ExA notes that the Applicant will seek to agree the appropriate locations for pile monitoring with the relevant stakeholders to ensure that monitoring complies with the Best Practice Guidance; furthermore, DML conditions 28(4) and 28(5) contain adaptive management measures should the assessment show significantly different underwater sound modelling results to those assessed in the ES. The Applicant has also committed to providing the information from this monitoring to the Marine Noise Registry (DML condition 24).
- 3.8.97. The ExA appreciates that Natural England would like further monitoring carried out for activities that have the potential to disturb marine mammals and recognises that both the MMO and Natural England guidance includes validation and adaptive management recommendations. However, that guidance also notes that post construction monitoring should not be designed to detect unforeseen impacts. Notwithstanding, the ExA acknowledges that there could be benefits to having a more sustained programme of construction monitoring associated with the Proposed Development, not least to assist in developing a more detailed understanding of the construction effects on harbour porpoise. However, mindful of the potential cost and resource implications, proposals for monitoring also need to be, in the ExA's view, reasonable and proportionate. Consequently, the ExA supports the monitoring commitments that have been proposed by the Applicant with no amendments.
- 3.8.98. With specific regard to the MMO's suggested revisions to DML condition 29, the ExA does not consider the revisions to be necessary. The ExA acknowledges the MMO's explanation in [\[REP6-094\]](#) that this is not blanket adaptive management for every impact identified but specifically linked to the agreed monitoring being undertaken, but in that regard the outline IPMP seems to already be clear which monitoring measures may be adaptive. Furthermore, in the event that proves to be insufficient, and some monitoring uncovers unforeseen issues maybe worse than anticipated, it remains open to the MMO, as it made clear in its representations, to utilise Section 72 of the MCAA to vary the marine licence to request adaptive management/ mitigation if required. The ExA wishes to highlight that this approach may not be appropriate for other offshore wind applications/ decisions, but it is recommended in this case because there is no overlap of the Morgan Order limits with sensitive habitats or designated sites.
- 3.8.99. Overall, the ExA is content that monitoring measures commensurate with the scale and nature of the potential residual impacts on marine mammals identified in the ES have been secured in the IPMP [\[REP6-053\]](#) and the Commitments Register [\[REP6-052\]](#) and that those documents alongside the MMMP and UWSMS provide a suitable framework for finalisation of marine mammal mitigation and monitoring plans in the post-consent phase and that the measures proposed accord with the provisions of paragraph 2.8.222 of NPS EN-3.
- 3.8.100. The ExA is also satisfied that with regard to the IPMP as a whole, the Applicant has committed to adaptive measures where they are appropriate and capable of delivering tangible benefit and that final monitoring plans will need to take account of the most up to date information and evidence available before they are approved by the MMO in line with DML condition 20(1)(c).

## CONCLUSIONS

- 3.8.101. The ExA considers that the ES, taken together with the additional clarification material submitted during the Examination, presents an adequate assessment of the potential effects on marine mammals from both the Proposed Development alone and cumulatively with other proposals.
- 3.8.102. It is the ExA's view that subject to the implementation of identified mitigation there is potential for only minor adverse effects on marine mammals as a result of the Proposed Development. This view is particularly aided by the removal of high order UXO clearance from the DMLs and the Applicant's late commitment to using NAS if pile driven foundations are used. The ExA is mindful that for bottlenose dolphin there remains potential for significant cumulative effect during piling but considers that the requirements of the newly published marine noise policy, which will be adopted by the Applicant, reduces the likelihood of a such a significant impact arising.
- 3.8.103. Specifically in relation to UXO clearance, for the reasons set out above, the ExA takes the view that the case has been made for the inclusion of low order UXO clearance activities within the DMLs with only a minor amendment to condition 22(2) required to reflect the potential requirement for NAS to be utilised, unless the MMO agree otherwise.
- 3.8.104. The ExA is therefore satisfied that the methods of construction have been designed so as to reasonably minimise significant disturbance effects on marine mammals. It is also clear to the ExA that mechanisms have been put in place to secure suitable noise mitigation measures in the conditions of the draft DMLs [\[REP7-007\]](#). In arriving at this view, the ExA has taken into account the submissions of the relevant statutory nature conservation bodies.
- 3.8.105. The ExA has also had regard to the evidence of the statutory nature conservation bodies in relation to marine mammal monitoring and while it considers that there could be benefits to having a more sustained programme of construction monitoring associated with the Proposed Development, it also considers that further monitoring measures are not necessary. Specifically, there is no deficiency in the Applicant's assessment that requires addressing and without clear rationale or objectives having been identified for carrying out additional monitoring, the information gathered may not provide any useful information relevant for future projects.
- 3.8.106. As a result, and overall, the ExA is content that the provisions of NPS EN-3 (and particularly paragraphs 2.8.312 to 2.8.314) have been satisfied and that all relevant legislative and policy tests have been met and that the residual effects, whilst minor adverse, are not significant in EIA terms. The ExA therefore attributes only a little weight against making the Order and this is carried forward into the planning balance.

## 3.9. ORNITHOLOGY

### INTRODUCTION

- 3.9.1. This section considers the effects of the Proposed Development on offshore ornithology. The Examining Authority's (ExA) consideration of effects relevant to the Habitats Regulations Assessment (HRA) on ornithological features of European sites are considered in [Chapter 4](#) and [Appendix C](#) of this Report.

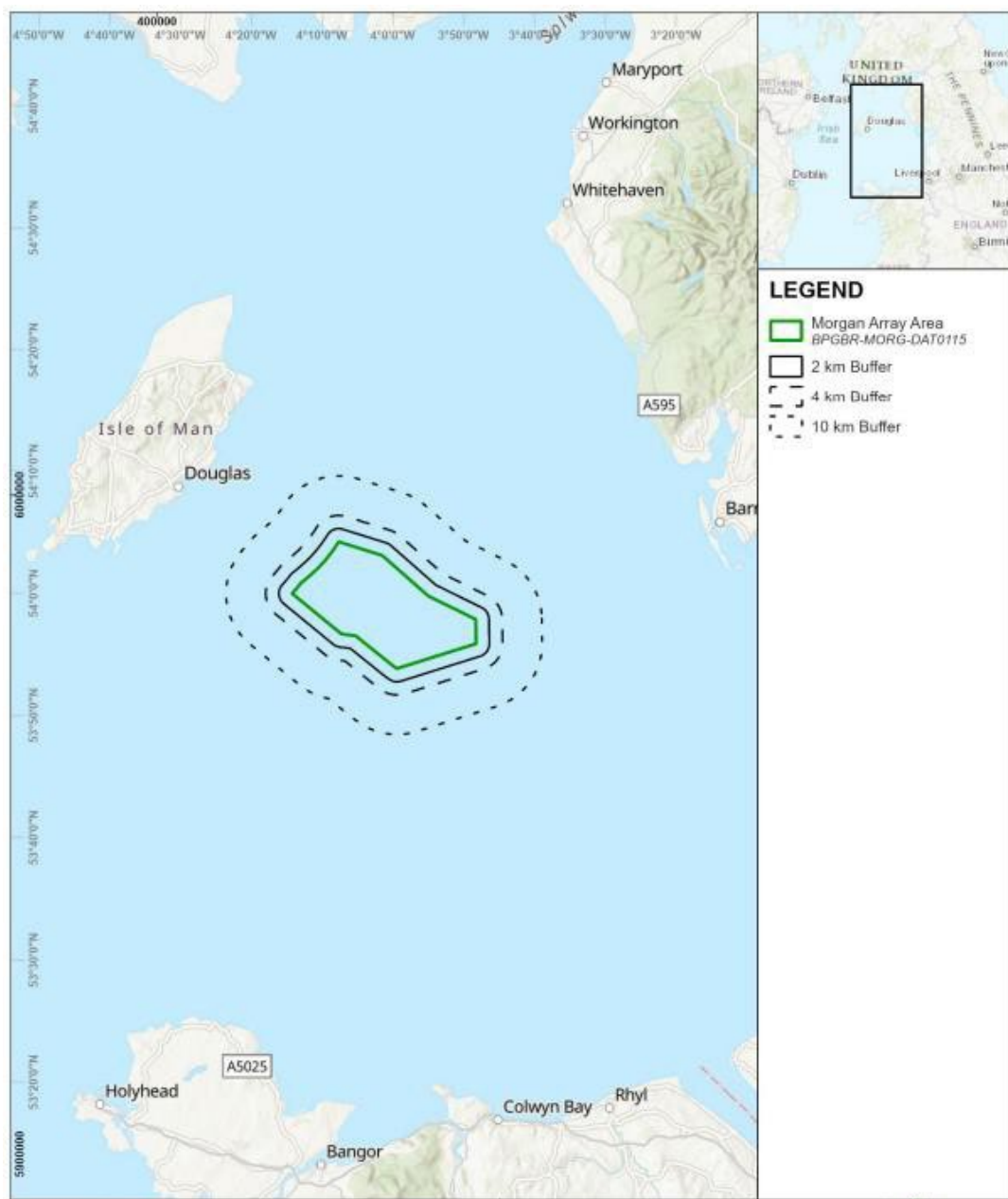
- 3.9.2. In its consideration of the topic the ExA has had regard to section 5.4 of the Overarching National Policy Statement for Energy (NPS EN-1) and section 2.8 of the National Policy Statement for Renewable Energy Infrastructure NPS EN-3, in particular paragraphs 2.8.136 to 146 and 2.8.240 to 244, and 2.8.315 and 2.8.316.

## THE APPLICATION

- 3.9.3. Environmental Statement (ES) Volume 2, Chapter 5: Offshore Ornithology [\[APP-023\]](#) presents the assessment of the potential effects of the Proposed Development on offshore ornithology during construction, operation and decommissioning, including cumulative effects.
- 3.9.4. It is supported by the following Annexes within Volume 4 of the ES:
- 5.1: Offshore ornithology baseline characterisation [\[APP-053\]](#)
  - 5.2: Offshore ornithology displacement technical report [\[APP-054\]](#)
  - 5.3: Offshore ornithology collision risk modelling technical report [\[APP-055\]](#)
  - 5.4: Offshore ornithology migratory bird collision risk modelling technical report [\[APP-056\]](#)
  - 5.5: Offshore ornithology apportioning technical report [\[APP-057\]](#)
  - 5.6: Offshore ornithology population viability analysis (PVA) technical report [\[APP-058\]](#)
- 3.9.5. The documents relevant to the HRA are listed in [Appendix C](#) of this Report.
- Baseline**
- 3.9.6. The study areas used in the assessment are defined in table 5.8 [\[APP-023\]](#) and illustrated in Figure 22 below.
- 3.9.7. Table 5.4.5 of ES Chapter 5 [\[APP-023\]](#) summarises the key reports utilised for the desktop study for the regional study area. Section 5.5.1 sets out the findings, which are summarised in table 5.11.
- 3.9.8. Site-specific digital aerial surveys were undertaken to characterise the distribution and abundance of seabirds within the study area between April 2021 and March 2023, as set out in Annex 5.1 [\[APP-053\]](#), whilst section 5.5.2 and table 5.12 of ES Chapter 5 present the results [\[APP-023\]](#).
- 3.9.9. Nationally designated sites identified for the assessment are described in table 5.14 [\[APP-023\]](#), including sites of special scientific interest (SSSI).
- 3.9.10. Valued ornithological receptors (VOR) are listed in table 5.15 [\[APP-023\]](#) based on the conservation status of each receptor, their vulnerability to impact and known abundance. Where the abundance of a species present at the Morgan Generation Assets plus a 4 km buffer breached the 1% threshold of the regional population in any season the species was identified as a VOR.



**Figure 22: Offshore ornithology study area<sup>30</sup>**



- 3.9.11. The conservation status for each species takes account of relevant conservation metrics in England, Wales and the Isle of Man (IoM), and are defined in Annex 5.1 [APP-053]. The inclusion of VORs in collision and displacement assessments is based on the vulnerability to each respective impact. This process is detailed in Annexes 5.2 [APP-054] and 5.3 [APP-055].
- 3.9.12. Species-specific impacts have been assessed in relation to their seasonality as defined in Furness (2015). Regional population estimates for the breeding, non-breeding, pre-breeding and post-breeding periods have been defined in table 5.15 [APP-023] and calculated using the biologically designed minimum population scales relevant for each species (Furness, 2015). Population estimates for the breeding population were based on Special Protection Area (SPA) and non-SPA

<sup>30</sup> Source: ES Volume 2, Chapter 5, Figure 5.1 [APP-023]– do not scale.

sites located within the species' foraging range of the order limits. Breeding colony counts were extracted from the Seabird Monitoring Programme (SMP) online database (JNCC et al., 2023). In addition, in the breeding season, the immature proportions presented in Furness (2015) were applied to the breeding adult proportion calculated from the SMP to account for this population component. Baseline mortality rates for all species (including juvenile and adult survival) and productivity rates were taken from Horswill and Robinson (2015).

3.9.13. Seasons used within the assessment were defined according to the breeding, non-breeding and migratory periods (autumn and spring migration) from Furness (2015) with the breeding season taking precedence where overlaps between seasonal extents exist. Seasons relevant to each species are shown in table 5.16 [APP-023]. Table 5.17 defines the regional population estimates for the non-breeding, wintering and autumn and spring migration periods. Paragraphs 5.5.4.11 to 5.5.4.17 explain the Applicant's methodology for the population calculations together with the limitations and assumptions made [APP-023].

3.9.14. Baseline mortality rates are explained in paragraphs 5.5.4.18 to 5.5.4.20 and the demographic rates, age class proportions and average mortality rates calculated are presented in table 5.18. The future baseline scenario and data limitations are explained in sections 5.5.5 and 5.5.6 [APP-023].

#### **Mitigation**

3.9.15. Primary and tertiary measures adopted as part of the project design as summarised in table 5.26 [APP-023] and to be secured within the draft Development Consent Order (DCO) and deemed marine licences (DML) of the draft DCO are:

- Primary measures: A commitment to a minimum lower turbine blade tip height of 34 m above lowest astronomical tide (LAT)
- Tertiary measures: The development of and adherence to an Offshore Environmental Management Plan (EMP) which will include measures to minimise disturbance to rafting birds from transiting vessels, and a Marine Pollution Contingency Plan

#### **Assessment of Effects: Offshore Ornithology**

3.9.16. Section 5.6 [APP-023] sets out the impact assessment methodology specific to the offshore ornithology impact assessment, and drawing upon [APP-012].

3.9.17. The assessment of potential significant effects assessed in section 5.9 [APP-023] includes:

- Disturbance and displacement from airborne noise, underwater sound, and presence of vessels and infrastructure. The full approach of the displacement assessment is detailed in Volume 4, Annex 5.2: Offshore ornithology displacement technical report [APP-054]
- Indirect impacts from underwater sound affecting prey species, as identified in ES Volume 2, Chapter 3: Fish and shellfish ecology [APP-021]
- Temporary habitat loss/ disturbance and increased suspended sediment concentrations, as assessed in ES Volume 2, Chapter 2 Benthic subtidal ecology [APP-020]
- Collision risk, for which the methodology is provided in ES Volume 4, Annex 5.3 [APP-055] and modelled in ES Volume 4, Annex 5.4 [APP-056].
- Combined displacement and collision risk

- Barrier to movement; the additional energetic cost to seabirds making commutes between foraging grounds at sea and breeding sites. The assessment considers the Proposed Development to not be located between notable seabird colonies and foraging areas as illustrated in ES Volume 4, Annex 5.1 [\[APP-053\]](#)
- Future monitoring: paragraph 5.9.7.1 [\[APP-023\]](#) states that based on the predicted impacts it is considered that no future monitoring is required given the level of certainty around the potential effects

### **Cumulative Effects Assessment**

- 3.9.18. Section 5.11 of [\[APP-023\]](#) considers the cumulative effects assessment (CEA). Tables 5.74, 5.80, 5.90, 5.98 and 5.106 summarise the CEA for kittiwake, guillemot, razorbill, Manx shearwater and gannet respectively in relation to cumulative disturbance and displacement impacts during the construction phase concluding that the effects would be negligible adverse (not significant in EIA terms) for all species in all three scenarios.
- 3.9.19. Tables 5.114 and 5.153 (kittiwake), 5.121 (guillemot), 5.132 (razorbill), 5.141 (Manx shearwater), 5.150 and 5.165 (gannet), 5.156 (great black-backed gull), 5.159 (herring gull), and 5.162 (lesser black-backed gull) in [\[APP-023\]](#) detail the qualitative assessments of the projects considered cumulatively with the Proposed Development (for displacement and/ or collision risk). A quantitative consideration of displacement impacts was not undertaken for the listed bird species for some of the older projects listed in the CEA, due to a lack of suitable data available in consideration of the following tier 1 projects: Burbo Bank, Walney 1 and 2, Robin Rigg, West of Duddon Sands, Gwynt y Môr and Ormonde.
- 3.9.20. The CEA in relation to cumulative disturbance and displacement impacts during the operations and maintenance phase is summarised in tables 5.115 (kittiwake), 5.122 (guillemot), 5.133 (razorbill), 5.142 (Manx shearwater), and 5.151 (gannet), and concludes that the effects would be negligible adverse (not significant in EIA terms) for all species in all three scenarios [\[APP-023\]](#).
- 3.9.21. The cumulative disturbance and disturbance effects during the decommissioning phase are anticipated to be similar to those predicted during all phases if the decommissioning schedule overlaps with that for the other OWFs within the CEA. The impact is assessed as negligible for all receptors which is not significant in EIA terms (paragraph 5.11.2.38 [\[APP-023\]](#)).
- 3.9.22. Section 5.11.3 considers collision risk in the operations and maintenance phase. There are collision risk impacts associated with scenarios 2 and 3 only (scenario 1 includes the Proposed Development with the Transmission Assets only), where seabirds could encounter different OWFs across large areas. Kittiwake, lesser black-backed gull, herring gull, great black-backed gull and gannet are considered in the CEA. Manx shearwater are not considered for cumulative assessment as the total predicted impact from the Morgan Generation Assets was less than 0.001 collisions/annum.
- 3.9.23. The CEA for cumulative collision risk impacts for each of the listed species are summarised in tables 5.154 (kittiwake), 5.157 (great black-backed gull), 5.160 (herring gull), 5.163 (lesser black-backed gull), and 5.166 (gannet). The significance of effect for all are found to be minor adverse (not significant) in scenario 3.

- 3.9.24. The CEA for combined displacement and collision risk in the operations and maintenance phase is set out in section 5.11.4, where kittiwake and gannet are adversely affected by both displacement and collision. The Applicant recognises that assessing the two potential impacts together could amount to double counting, in that birds subject to displacement would not be subject to collision risk as they are already assumed not to have entered the array area, and those subject to mortality by collision risk would not be able to be displaced as well. It states that as a more refined method to consider displacement and collision together whilst reducing any double counting of impacts is not agreed with the statutory nature conservation bodies (SNCB) the precautionary and highly unlikely approach is presented in the assessment (paragraph 5.11.4.2 [\[APP-023\]](#)).
- 3.9.25. Tables 5.169, 5.170 and 5.171 of [\[APP-023\]](#) set out the kittiwake and gannet combined displacement and collision cumulative impacts. It is concluded that during the operations and maintenance phase there would be a minor adverse (not significant) effect on both species in scenarios 2 and 3.
- 3.9.26. The Applicant considers that given that there are no significant cumulative effects to any species, and the level of certainty around the potential effects, no mitigation nor future monitoring is required (paragraph 5.14.1.1 [\[APP-023\]](#)).
- 3.9.27. **Transboundary Effects**
- 3.9.28. The Applicant carried out a screening and assessment of transboundary impacts upon the interests of other states as part of the EIA (including impacts on species which may have connectivity to UK SPAs). The potential transboundary impacts assessed within sections 5.10 and 5.11 are summarised as:
- Disturbance and displacement during all phases: negligible adverse to minor adverse significance (not significant in EIA terms)
  - Indirect disturbance and displacement resulting from changes to prey and habitats during all phases: negligible adverse (not significant)
  - Collision risk during the operations and maintenance phase: negligible to minor adverse (not significant)
  - Barrier effect during the operations and maintenance phase: negligible adverse (not significant) (section 5.12 [\[APP-023\]](#))

## ISSUES CONSIDERED DURING THE EXAMINATION

- 3.9.29. Natural England and Natural Resources Wales (NRW) as the SNCBs submitted relevant representations (RRs) [\[RR-026\]](#) and [\[RR-027\]](#) and participated in writing throughout the Examination, but did not attend any of the Issue Specific Hearings (ISH). The Royal Society for the Protection of Birds (RSPB) is not a SNCB. It submitted a RR [\[RR-035\]](#) and participated more sporadically in the Examination.
- 3.9.30. The Joint Nature Conservation Committee (JNCC) did not register as an IP at RRs stage but participated from Deadline (D) 3 onwards in relation to non-English sites for which it has joint or sole responsibility. Natural England's Relevant Representation (RR) [\[RR-026\]](#) explained that Natural England is authorised to exercise the JNCC's functions as a statutory consultee in respect of applications for offshore renewable energy installations in offshore waters adjacent to England.
- 3.9.31. In its Rule 6 letter [\[PD-001\]](#) the ExA wrote to NatureScot and Northern Ireland's Department of Agriculture, Environment and Rural Affairs (DAERA) inviting them to participate in the Examination as 'Other Persons', and this was followed up with written questions [\[PD-004\]](#) and [\[PD-009\]](#). Neither NatureScot or DAERA responded,

nor submitted any later representations to the Examination in relation to ornithological matters.

- 3.9.32. The Applicant and NRW produced a Statement of Common Ground (SoCG), the final version being agreed at D6 [\[REP6-083\]](#). It was confirmed prior to the Examination that a SoCG with the JNCC was not required [\[PD1-004\]](#). Natural England produced a Principal Areas of Disagreement Summary Statement (PADSS) in lieu of a SoCG, the final version being submitted in between D6 and D7 [\[AS-015\]](#). Natural England also produced a risk and issues log to accompany its comments at each deadline. A final SoCG with the RSPB was submitted at D6 [\[REP6-086\]](#).
- 3.9.33. The MMO confirmed in its RR [\[RR-020\]](#) that it deferred ornithology matters to Natural England. The North West Wildlife Trusts [\[RR-031\]](#) expected impacts to be minimised through the project design and turbine scale and type. Concerns were raised over the possible disturbance, displacement and barrier effects on sensitive receptors, particularly black-legged kittiwake and northern gannet, but they did not engage any further in the Examination.
- 3.9.34. The Isle of Man Government Territorial Sea Committee (IoM TSC) in its RR [\[RR-015\]](#) raised its interest in Manx shearwater and the calculation of the baseline, but agreed that this would not affect the conservation status nor impact predictions for this particular species. It was content with the inclusion of all of the Manx colonies within the apportioning assessment [\[APP-057\]](#) and the conclusions of no likely significant effects. It highlighted the Applicant's consideration of the great black-backed gull impacts with specific regard to the IoM population and noted that its status on the IoM red list had been accounted for within the ES. The TSC also welcomed the mitigation measures adopted as part of the Application [\[RR-015\]](#). The IoM Ramsar sites are considered as part of the ExAs conclusions on the HRA ([Chapter 4](#) and [Appendix C](#) of this Report).
- 3.9.35. Moir Vannin Offshore Wind Farm (OWF) Limited [\[RR-021\]](#) referred to a lack of consideration for the Moir Vannin OWF in the CEA. The Applicant explained that there are currently no impact assessments for Moir Vannin OWF given it was only at scoping stage and had been allocated into a lower tier in the CEA, reflecting the uncertainty associated with the impacts (table 2.21 [\[PD1-017\]](#)).
- 3.9.36. Concerns were predominately raised by Natural England and NRW (which also related to HRA matters as discussed in [Appendix C](#) of this Report), and to a lesser extent the RSPB and the JNCC. Many of the concerns in relation to methodological issues were maintained through much of the Examination as discussed further below.
- 3.9.37. Some matters were resolved in the early deadlines, including the following.
- 3.9.38. **Errata within the Application documents:** errata sheets were submitted in response to Natural England's RR (Appendix B [\[RR-026\]](#)) to correct typographic and transcription errors relating to the ornithology assessments in the ES and its associated annexes (between the procedural deadline [\[PD1-003\]](#) and D3 [\[REP3-011\]](#)). At D6 the errata were added to the front of the final version of ES Chapter 5 [\[REP6-033\]](#), and Annexes 5.3 [\[REP6-038\]](#) and 5.5 [\[REP6-039\]](#), which were otherwise unchanged. The approach to errata was explained by the Applicant in response to ExQ1 GEN 1.1 [\[REP3-006\]](#) and is an agreed matter in Natural England's Risk and Issues Log [\[AS-016\]](#).



3.9.39. **Mitigation: Clarification of the ‘air gap’** and minimum lower blade tip height above highest astronomical tide (HAT) as well as LAT – raised in Natural England’s RR (Appendix B [\[RR-026\]](#)) and explained in the Applicant’s response to ExQ1 MO 1.6 [\[REP3-006\]](#). A minimum distance of 26m from HAT (as well as 34m from LAT) to the lowest point of the rotating blade was added to the draft DCO at D3 [\[REP3-013\]](#) to clarify to the satisfaction of Natural England the clearance gap for bird flight below rotating blades.

3.9.40. **Assessment Methodology:** Whilst a number of methodological issues persisted as set out further below in this Report, some were resolved to the satisfaction of the SNCBs in the early to middle stages of the Examination including:

- Design-based density estimates for collision risk modelling (CRM)
- Method used for CRM
- Clarification of the source of the correction factor for puffin
- Calculations of regional populations
- Proportions of birds in flight densities
- Calculation of density estimates
- Flight speed parameters
- Use of species-specific rates for CRM
- Consideration of sabbatical birds

3.9.41. Issues considered further during the Examination relating to offshore ornithology matters which were largely HRA related are dealt with in more detail in [Appendix C](#) and summarised in [Chapter 4](#) of this Report. Issues which persisted throughout the Examination include:

- Assessment methodology: the numerous methodological issues are largely dealt with in [Chapter 4](#) and [Appendix C](#) (cumulative assessment, apportionment, collision risk seasonal definitions, CRM apportioning avoidance rates and flight speeds, displacement assessments, combined displacement and collision risk) and only summarised below
- Assessment and mitigation for great black-backed gulls
- Pen y Gogarth/ Great Orme’s Head SSSI
- Consideration of Highly Pathogenic Avian Influenza (HPAI): RSPB only
- Post-consent monitoring

### **Assessment Methodology**

3.9.42. Natural England initially stated (Appendix B [\[RR-026\]](#)) that it was unable to comment on the assessment conclusions on the basis that the methodology of assessment deviated from SNCB advice. This was previously highlighted through the Expert Working Group (EWG) process and review of the Preliminary Environmental Information Report (PEIR), undermining the viability of the conclusions. In summary:

- The Applicant’s qualitative assessment of impacts from historic projects without considering quantitative impacts – resulting in a high level of uncertainty in the CEA.
  - Natural England Risk and Issues Log B1 [\[RR-026\]](#) and [\[REP1-053\]](#) and NRW [\[RR-027\]](#), [\[REP3-051\]](#) raised this as a significant concern in the early stages of the Examination. In an effort to resolve these concerns, the Applicant submitted a gap-filling exercise for historic projects [\[REP1-010\]](#) at D1 and its reviews of the cumulative and in-combination assessments at D3

[REP3-019] and D4 [REP4-024]. The issue was resolved at D6, following the Applicant's submission of updated CEAs [REP5-031], [REP5-032], [AS-013], [REP5-034] and [REP5-035] which included impact values for historical projects that were not included in the original assessment or were assessed qualitatively. The calculations were in line with the advised approach provided by Natural England and NRW both confirmed their concerns regarding the CEA methodology had been addressed prior to the close of the Examination [AS-012], [AS-015] and [AS-016].

- Inconsistencies in data used across the Round 4 Irish Sea OWF projects and consideration of cumulative effects as the other Applications progressed.
  - The concurrent Examinations for Mona OWF and Morecambe OWF and progress of other Irish Sea projects were dealt with by the Applicant through the submission of reviews of the CEA [REP2-023], [REP3-019], [REP4-024], [REP6-042].
- The CRM and displacement assessments, and the subsequent apportioning undertaken by the Applicant. The Applicant's approach in undertaking multiple assessments using a mixture of SNCB advised ranges and its own preferred parameters had made it difficult to review the assessments.
- The approach taken to regional breeding populations for the project alone assessment during the breeding season.
- Use of kittiwake age class data in apportioning calculations, suggesting that immature birds should be accounted for differently.

- 3.9.43. The above matters are dealt with in the [Chapter 4](#) and [Appendix C](#) of this Report given that the same issues arose in relation to the HRA.
- 3.9.44. NRW, the JNCC and the RSPB raised similar concerns regarding methodological issues [RR-027], [REP3-035], [RR-035].
- 3.9.45. The Applicant disagreed with the concerns raised in respect of the methodological matters, however throughout the Examination it submitted a number of technical clarification notes to seek to address such concerns. These are detailed in table 4.1 and of its closing submissions [REP6-014]. Overall, the Applicant sought to demonstrate that the assessments in the ES were robust and that the overall conclusions of no significant effects remained.
- 3.9.46. The parties engaged through the Examination and by the close all the methodological concerns were addressed, as set out in the SNCB's final submissions [AS-012], [AS-015], [AS-016], [REP6-083], [REP6-106]. As set out in [Chapter 4](#) and [Appendix C](#) of this Report, correspondingly all SNCBs confirmed their conclusions of no adverse effects on integrity for all relevant SPAs and associated qualifying features either alone or in-combination.
- 3.9.47. Related to methodological issues, the Ørsted IPs submitted concerns in its RRs [RR-005], [RR-007], [RR-023], [RR-032], [RR-043], [RR-044]. In response to the ExA's first written question (ExQ1) MO 1.15 the Ørsted IPs confirmed that it considered Natural England to be best placed to address the issues raised [REP3-053]. The Ørsted IPs confirmed they had remaining concerns, following the Applicant's response to ExQ2 CE 2.3 (lifetimes of existing OWFs) regarding the exclusion of Barrow OWF from the ornithology CEA, given that there is nothing requiring Ørsted to decommission or cease operating in 2030 [REP6-098]. Natural England's answer to the same question [REP5-080] noted that some OWF licences

do not have an expiry date provision, and as it was not responsible for the licences, it could not advise on the implications for the CEA.

- 3.9.48. The Applicant subsequently included Barrow OWF (and North Hoyle and Rhyl Flats) in updated ornithological assessment clarification data (table 2.3 [\[REP5-009\]](#)) and [\[REP5-032\]](#), [\[REP5-032\]](#), [\[AS-013\]](#), [\[REP5-033\]](#), [\[REP5-034\]](#), [\[REP5-035\]](#), notwithstanding its remaining view that no further assessment was required. Whilst the Ørsted IPs acknowledged that Barrow had been included in this data, they sought clarity as to how the information has been considered in the Applicant's reporting [\[REP6-098\]](#). This was closed as a methodological concern by Natural England in its final risk and issues log [\[AS-016\]](#).

#### ***ExA considerations on assessment methodology***

- 3.9.49. The ExA acknowledges the efforts made between the Applicant and the SNCBs to engage throughout the Examination to resolve the methodological differences, which were substantially resolved by the close apart from any remaining matters set out below. The ExA is satisfied that the parties have worked together in accordance with relevant policies and guidance.

#### **EIA cumulative collision impacts on great black-backed gull**

- 3.9.50. Natural England raised issues early [\[RR-026\]](#) and throughout the Examination in its Risk and Issues Log (B31), regarding the difference in considerations of significance for the assessment conclusions for EIA cumulative collision impacts on great black-backed gull. Whilst the Applicant considered that impacts would be of minor adverse significance (not significant in EIA terms), Natural England considered that the cumulative collision impact would be moderate adverse (significant). Natural England advised using the herring gull 0-1 year survival rate and the adult great black-backed gull rate as detailed in Horswill and Robinson.
- 3.9.51. Natural England also re-iterated advice originally provided (through the EWG) regarding use of species-specific rates as inappropriate for CRM. It sought estimates calculated using ANCB advised parameters to be progressed through all stages of the assessment (as set out in its Risk and Issues Log B32). This matter persisted beyond D6 and is discussed in [Chapter 4](#) and [Appendix C](#) of this Report (HRA) in relation to the Isles of Scilly SPA.
- 3.9.52. The difference in view on this outstanding matter persisted, and at D5 the Applicant provided a detailed assessment for cumulative collision impacts on great black-backed gull in the Additional Population Viability Analysis (PVA) Modelling for Great Black-Backed Gull Cumulative Assessment [\[REP5-031\]](#). Here the Applicant provided a calculation of cumulative totals using Natural England's preferred approach as well as the Applicant's parameter assumptions, incorporating collision risk estimates for all projects further to the previously submitted Offshore Ornithology CEA and In-combination Gap-filling of Historical Projects Note [\[REP1-010\]](#).
- 3.9.53. The additional assessment noted that whilst the conservation status and population trends of great black-backed gull in a UK context are not favourable, the results of the PVA (as presented in table 1.9 [\[REP5-031\]](#)) indicated that these are unlikely to be exacerbated by the predicted cumulative impact under all scenarios. Furthermore, the contribution of the Proposed Development would make a very small difference to the PVA outputs under all scenarios. The Applicant stressed that its commitment to an increased minimum lower blade tip height above sea surface has served to significantly reduce the contribution of the Proposed Development to

the cumulative totals estimated in section 1.3 of the assessment (paragraph 1.4.1.10 [\[REP5-031\]](#)).

- 3.9.54. [\[REP5-031\]](#), paragraph 1.4.1.14 concluded the potential cumulative impacts would be of minor adverse significance for all the scenarios considered (not significant), which is consistent with the conclusion reached in ES Chapter 5 [\[APP-023\]](#). Natural England confirmed in its final PADSS [\[AS-015\]](#) and Risk and Issues Log [\[AS-016\]](#) that issue B31 had been resolved given the Applicant's consideration of the ANCB advised method.
- 3.9.55. Issue B55 of Natural England's Risk and Issues Log [\[AS-016\]](#) remained (partially) not agreed at the close of the Examination. The issue originally stated that whilst it was in general agreement with the Applicant that their project-alone impacts are low, Natural England did not consider it appropriate to comment on the assessment conclusions. This highlighted the issues arising from deviations from SNCB advice in the assessment of displacement and collision, and especially the consideration of historic impacts in the cumulative and in-combination assessments.
- 3.9.56. Following the submission of the agreed impact figures, Natural England considered that the issue of deviations from SNCB advice and methodological issues were resolved as set out above. However, it set out at D5 and D6 that the impact figures have revealed that cumulative impacts of multiple OWFs have the potential to cause a significant adverse effect at the EIA scale for great black-backed gull. Following its response to the ExA's Rule 17 letter [\[PD-012\]](#), Natural England acknowledged that the Applicant had explored the potential of additional mitigation by raising the minimum lower turbine blade tip height above sea surface to increase the 'air gap' and concluded that no further increase is possible. Natural England retained its position as 'agree to disagree' in its final Risk and Issues Log [\[AS-016\]](#).

***ExA considerations on EIA cumulative collision impacts on great black-backed gull***

- 3.9.57. The ExA are satisfied that the Applicant has addressed the concerns raised by Natural England on this matter. This is notwithstanding the 'agree to disagree' position. The ExA notes that it is not set out as a principal concern within the final PADSS (its principal concerns of the CEA methodology and CRM assessments had both been resolved and rated green) [\[AS-015\]](#).
- 3.9.58. The ExA considers the defined minimum height above sea surface to the lowest point of the turbine blades to be acceptable mitigation, as secured by R2 of the recommended DCO (and condition 10 of the DMLs).
- 3.9.59. [Chapter 4](#) and [Appendix C](#) of this Report provide commentary regarding the specific impacts on great black-backed gull populations associated with the Isles of Scilly SPA.

**Pen y Gogarth/ Great Orme's Head SSSI**

- 3.9.60. NRW in its RR [\[RR-027\]](#) and WR [\[REP1-056\]](#) requested clarification and further assessment of the potential impacts on the breeding seabird features of Pen y Gogarth/ Great Orme's Head SSSI. The Applicant submitted a clarification note in response to ISH1 action point 15 [\[REP1-013\]](#).
- 3.9.61. NRW noted at D3 that whilst the Applicant had presented updated apportionment rates for the SPA colonies, no analysis had been presented for the specific non-SPA colonies assessed quantitatively (Great Orme's Head SSSI). It also sought

further clarification on the colonies used for each species, that full apportioned displacement matrices for the site should be provided in order to determine the level of significance of impacts to this colony from the project alone, and that SNCB recommended input parameters should be separated from the Applicant's preferred parameters. NRW also requested consideration of cumulative impacts to the SSSI (section 1.1.5 [\[REP3-050\]](#)).

3.9.62. The clarification note was subsequently updated at D4 [\[REP4-029\]](#). NRW agreed that the project alone and cumulatively would be unlikely to have a significant effect on the guillemot and razorbill features of the SSSI. For kittiwake, NRW indicated that the project alone impacts could be considered to be undetectable against background mortality. However, NRW considered that the predicted cumulative collision impacts as presented are likely to be underestimated and had the potential to give rise to moderate adverse effects for the kittiwake feature of the SSSI. Notwithstanding this outstanding concern, NRW welcomed the commitment by the Applicant for provision of proportionate mitigation for kittiwake through the increased minimum lower wind turbine blade tip height above sea surface (section 1.1 [\[REP5-083a\]](#)).

3.9.63. The clarification note was subsequently updated again by the Applicant at D6 [\[REP6-062\]](#), drawing on other clarification notes submitted into the Examination as set out in paragraph 1.1.1.2 of the note. It included gap-filled impact estimates for the Barrow, North Hoyle and Rhyl Flats OWFs in the cumulative assessments, as well as cumulative estimates for the proposed Llŷr 1 floating OWF. NRW had not provided comment on this additional information by the close of the Examination. Consequently, at the close of the Examination the parties remained disagreed on the conclusions for kittiwake, however the Applicant considered the issue to not be material given that NRW were content that proportionate mitigation had been provided.

#### ***ExA considerations on Pen y Gogarth/ Great Orme's Head SSSI***

3.9.64. The ExA is satisfied that the Applicant has appropriately responded to NRW's comments and concerns regarding potential effects on the Pen y Gogarth/ Great Orme's Head SSSI, with the submission of a number of clarification notes resulting in the final version at D6. This had not been reviewed by NRW by the close of the Examination; nonetheless the ExA considers it constitutes a robust assessment of the potential effects, which the ExA agrees would not be significant.

3.9.65. The minimum height above sea level to the lowest point of the turbines was increased as part of the project design and the ExA considers this to be acceptable mitigation, as secured by R2 of the recommended DCO (and condition 10 of the DMLs).

#### **Highly Pathogenic Avian Influenza (HPAI)**

3.9.66. The RSPB [\[RR-035\]](#), [\[REP5-091\]](#) raised concerns that the implications of HPAI had not been adequately considered in the assessments. It set out the consequences that should be considered in the assessment including the impact on characterisation of the baseline environment, alterations to extent of interactions with wind farms and changes in robustness of protected population to additional mortality. Natural England [\[RR-026\]](#), [\[REP1-053\]](#) stated that the recent seabird population trends section baseline characterisation [\[APP-053\]](#), revised in [\[REP1-026\]](#) does not consider the impacts of HPAI in the region, but presented this in its Risk and Issues log only as a note, without providing further comment.



- 3.9.67. The ExA sought clarity from the Applicant around how HPAI had been considered and queried whether the RSPB considered any additional information or assessment was required from the Applicant regarding HPAI effects. The Applicant confirmed that HPAI had been considered in its application documents following Natural England guidance. It stated that there are no large breeding seabird colonies near the Proposed Development, so HPAI was likely to have not impacted local populations and the HRA Stage 2 assessments use recent population sizes, considering post-HPAI effects. Few HPAI cases were reported in breeding seabirds in 2024, with some colonies showing improved breeding numbers. It considered longer datasets are needed to determine HPAI's impact on breeding productivity , (ExQ1 MO 1.8 [\[REP3-006\]](#)).
- 3.9.68. In its response to the same question, the RSPB acknowledged that the Applicant had used the most recent population counts but retained concerns that they do not reflect the potential longer-term impacts on these populations [\[REP3-052\]](#). The Applicant re-iterated that it has followed Natural England advice [\[REP4-007\]](#).
- 3.9.69. In response to ExQ2 MO 2.5 [\[REP5-091\]](#) the RSPB retained its request that consequences of the HPAI outbreak should be further considered in the Applicant's assessment. The Applicant's response noted the RSPB's residual concerns (section 18 [\[REP6-004\]](#)), and this remained a matter not agreed in the final SoCG [\[REP6-086\]](#). Its closing statement provided explanation for its approach (paragraphs 4.4.2.15 to 4.4.2.19 [\[REP6-014\]](#)), including reference to its assessment in the ES [\[APP-023\]](#) and the lack of concerns raised by Natural England, NRW and the JNCC in relation to the consideration of HPAI during the Examination. It also highlighted that the RSPB had agreed with the mitigation measures proposed in the Application.

#### ***ExA considerations on HPAI***

- 3.9.70. The ExA has had regard to the RSPB's comments, and notes that it has not made specific comment in relation to the Applicant's assessment of HPAI within the ES. The consideration of long-term effects of HPAI is a wider strategic matter. The ExA does not consider that the RSPB's comments justify further assessment for the Proposed Development in order to inform the SoS's decision, given that there are no large breeding seabird colonies where HPAI would have affected the populations recorded during the site-specific surveys.
- 3.9.71. The Applicant has followed Natural England's advice, and the ExA acknowledges that no specific concerns were raised during the Examination by any of the SNCBs.

#### **Post-consent monitoring**

- 3.9.72. From its RR and the start of the Examination, Natural England considered that there should be monitoring of ornithology conditioned in the DMLs, given that throughout the documents the Applicant highlighted knowledge and evidence gaps which could not be addressed in the absence of post-consent monitoring. It stated that data acquired during post-consent monitoring could be used to validate predictions and assumptions made within the application, help to detect unforeseen effects and address uncertainty. Natural England noted that this is particularly valuable for receptors not usually the subject of post-construction monitoring, such as Manx shearwater, and referred the Applicant to its best practice advice (Appendix B [\[RR-026\]](#) and [\[REP1-053\]](#)).
- 3.9.73. The Applicant responded that the very small impacts make it difficult to define monitoring options that have the statistical robustness to address conditions pertaining to monitoring that may be included in the DMLs. It also highlighted that

other recent projects (such as Walney Extension) have not undertaken post-consent monitoring and other projects yet to be consented also do not propose it [PD1-017]. At D2, the Applicant noted the strong move over the last few years towards strategic monitoring in recognition of the limitations of project level monitoring, and highlighted that there was already a considerable number of strategic evidence gathering programmes in existence at an offshore wind industry level [REP2-005].

- 3.9.74. The Applicant confirmed that it is engaged in many of these groups at a national level, which are endorsed by the Crown Estate and would assist in filling evidence gaps and help to achieve a greater level of understanding than is currently possible through individual project level monitoring. It highlighted that this more strategic holistic approach, rather than individual project-alone monitoring, would better address the uncertainty regarding impacts from offshore wind developments. It considered that Natural England's requested monitoring would be disproportionate to the level of effects and would not align with the MMO's review of post-consent monitoring. The Applicant confirmed that it would continue to participate in strategic evidence gathering programmes designed to fill evidence gaps (Table 2.7 [REP2-005]).
- 3.9.75. The ExA highlighted NPS EN-3 paragraphs 2.8.83 to 87 and 2.8.295 and given Natural England's advice it asked for the inclusion of monitoring of key ornithological receptors within the in-principle monitoring plan and for it to be appropriately secured in the draft DCO (ExQ1 MO 1.13 [PD-004]). Natural England's response stated that monitoring should ideally be collaborative with Mona OWF, including digital aerial surveys of Manx shearwater, and would welcome further engagement [REP3-048]. The Applicant's response [REP3-006] re-iterated why it considered ornithological monitoring would be unjustified in the context of the lack of impacts and strategic monitoring, and this was further explained by the Applicant at ISH2.
- 3.9.76. With particular reference to Morecambe OWF and potential collaborative monitoring, the Applicant understood that Morecambe OWF had included options for monitoring but had not directly committed to it, and that its focus was related to effects on red throated diver which were an issue for Morecambe but not Morgan. (ExQ1 MO 1.14 [REP3-006]).
- 3.9.77. Further responding to Natural England's comments regarding Manx shearwater, the Applicant stressed that the Proposed Development is not located in an area of importance for this species, with higher densities being towards Ireland. It noted that the uncertainties are best addressed through strategic monitoring and that there is not a clear justification for project-specific ornithological monitoring in this case (re-iterating comments made in [REP2-005] regarding strategic monitoring) (Table 2.2 [REP4-009]).
- 3.9.78. Natural England agreed with the Applicant that strategic monitoring programmes are preferable. It noted in response to ExQ2 MO 2.6 that a collaborative approach in the region would enable testing of the assumptions made in the impact assessments carried out to date and could be utilised strategically to reduce uncertainty in future impact assessments in the Celtic Sea zone, where further developments are envisaged [REP5-080]. Natural England provided a copy of its best practice advice on expectations for monitoring [REP5-082]. The Applicant confirmed it had held further discussions with Natural England on the matter, noting that the SNCB was unable to provide a justification for its request (Table 2.3 [REP4-009]).
- 3.9.79. The Applicant did not consider there to be any uncertainty or risk associated with the assessment conclusions that would merit project-specific monitoring validation

attention. It highlighted that the Proposed Development is not located in an area of sea of importance for Manx shearwater as illustrated in the results of the 24-month aerial survey, and in distribution maps presented by Waggitt et al. (2020). Any project-specific surveys and monitoring would not be able to detect changes in distribution and abundance of Manx shearwater. It stressed that the existence of uncertainty is not reason enough to require a project to undertake monitoring and that strategic monitoring would provide an adequate amount of data to inform statistically robust conclusions. The Applicant confirmed that the arguments apply equally to Mona OWF [REP6-004].

- 3.9.80. The IoM TSC [REP3-033] referred to monitoring as an option in its response to ExQ1 MO 1.12(ii), given the uncertainties in baseline characterisation of Manx shearwater and to assist future development assessments. No further comments were provided during the Examination, and the final SoCG confirms its agreement on all ornithological matters [REP6-079].
- 3.9.81. Natural England's final Risk and Issues Log and PADSS confirm that the lack of post-consent monitoring in relation to key offshore ornithology receptors is an outstanding amber matter [AS-015] and [AS-016], where the parties are in an 'agree to disagree' position.

#### ***ExA considerations on monitoring***

- 3.9.82. The ExA acknowledges Natural England's position on post-consent monitoring, and more specifically in relation to Manx shearwater, having regard to its best practice guidance and NPS EN-3 paragraphs 2.8.82 to 2.8.87. There are clear benefits to the provision of monitoring of ornithological effects of OWFs generally, particularly where there are gaps in evidence. Nonetheless, the ExA accepts the Applicant's position regarding the lack of effect which would not adequately inform any statistically robust conclusions on a project-specific basis.
- 3.9.83. The ExA considers that the imposition of project-specific ornithological monitoring as part of the recommended DCO would be unreasonable and unnecessary in this case. The Applicant's case regarding strategic monitoring, where work is ongoing between government and industry, is more persuasive.

#### **CONCLUSIONS**

- 3.9.84. The ExA has considered the effects of the Proposed Development on offshore ornithology in the context of the policy framework set by NPS EN-1 and EN-3, in particular NPS EN-3 paragraphs 2.8.136 to 146, 2.8.240 to 2.8.244, and 2.8.315 and 2.8.316 specifically relating to ornithology and OWF developments.
- 3.9.85. The Applicant's assessment set out in ES Chapter 5 [REP6-033] concludes that all effects both alone and cumulatively to all assessed bird species, in all stages, would not be significant. This conclusion remained to the end of the Examination notwithstanding the volume of commentary from the SNCBs and the additional information submitted to the Examination.
- 3.9.86. The majority of the concerns related to methodological issues, and these have been largely resolved with all relevant SNCBs by the close of the Examination. The ExA is satisfied that the Applicant's assessment (with the addition of the numerous clarification notes) has been robustly carried out and follows the relevant policies and guidance. The overall conclusions on the significance of effect on all bird species during all phases, both alone and cumulatively, remain unchanged following the submission of the additional information.

- 3.9.87. The ExA is satisfied that the mitigation measures forming part of the Application, including the commitment to a minimum turbine blade tip clearance above sea level of 34m above LAT (and 26m above HAT), secured by table 1 of R2 of the recommended DCO (and condition 10 of the DMLs) are sufficient. The outline offshore EMP [\[REP4-018\]](#) appropriately includes measures to minimise disturbance to rafting birds from transiting vessels [\[REP5-046\]](#). The ExA considers that given that effects have been found to be not significant, no monitoring or additional mitigation is necessary.
- 3.9.88. At the end of the Examination, monitoring was an outstanding ‘agree to disagree’ matter with Natural England. The ExA acknowledges that NPS EN-3 in paragraphs 2.8.82 to 2.8.87, 2.8.295 and 2.8.296 notes that, where requested by the SoS, applicants are required to undertake environmental monitoring to enable an assessment of the accuracy of the original predictions and improve the evidence base for future mitigation and compensation measures, enabling better decision-making in future assessments. It also encourages developers to consider monitoring collaboratively, and notes that work is ongoing between government and industry to support effective collaboration and the development of monitoring at a strategic level. However, in view of the very limited effects anticipated and the expected further collaboration, strategic monitoring would be preferable to project-specific monitoring and the ExA considers it unnecessary to include any stipulations for monitoring of offshore ornithology effects within the recommended DCO.
- 3.9.89. The ExA concludes that the Proposed Development is in accordance with the relevant sections of NPS EN-1 and EN-3 and is satisfied that all relevant legislation and other national policies and strategies are complied with, and that adequate mitigation is secured in the recommended DCO. Overall, the ExA attributes a little negative weight to the EIA aspects of offshore ornithology against the making of the Order.

## **3.10. PHYSICAL PROCESSES AND BENTHIC ECOLOGY**

### **INTRODUCTION**

- 3.10.1. The topic of marine physical processes (for example bathymetry, seabed morphology, sediment distribution and transport, and water temperature) was identified as a principal issue in the ExA’s initial assessment [\[PD-001\]](#). This section of the Report considers the potential impact of the Proposed Development seaward of mean high-water springs (MHWS). This section also considers the impact on benthic subtidal ecology primarily from the effects of installation of cables and foundation types on marine life and subtidal habitats.
- 3.10.2. In its consideration of this topic the Examining Authority (ExA) has had regard to the overarching National Policy Statement for Energy (NPS EN-1) taken together with the NPS for Renewable Energy Infrastructure (NPS EN-3). These national policy statements have been summarised in [Chapter 2](#) of this Report but for brevity section 5.4 of NPS EN-1 and sections 5.4 and 5.16 of NPS EN-1 and sections 2.8.31 to 2.8.33, 2.8.111 to 2.8.114, 2.8.120 to 2.8.126, 2.8.218 to 2.8.225, 2.8.233 to 2.8.236, 2.8.284, 2.8.295, 2.8.302 to 2.8.309 and 2.8.317 of NPS EN-3 are pertinent to physical processes and benthic ecology.
- 3.10.3. The ExA has also had regard to the North West Inshore and North West Offshore Marine Plan (NWMP), which aims to deliver the high level marine objectives set out

in the Marine Policy Statement, and which is of relevance to this section of the Report, specifically Policies NW-CAB-1, NW-MPA-1, NW-MPA-4, NW-BIO-1, NW-BIO-2, NW-BIO-3, NW-INNS-1 and NW-CE-1.

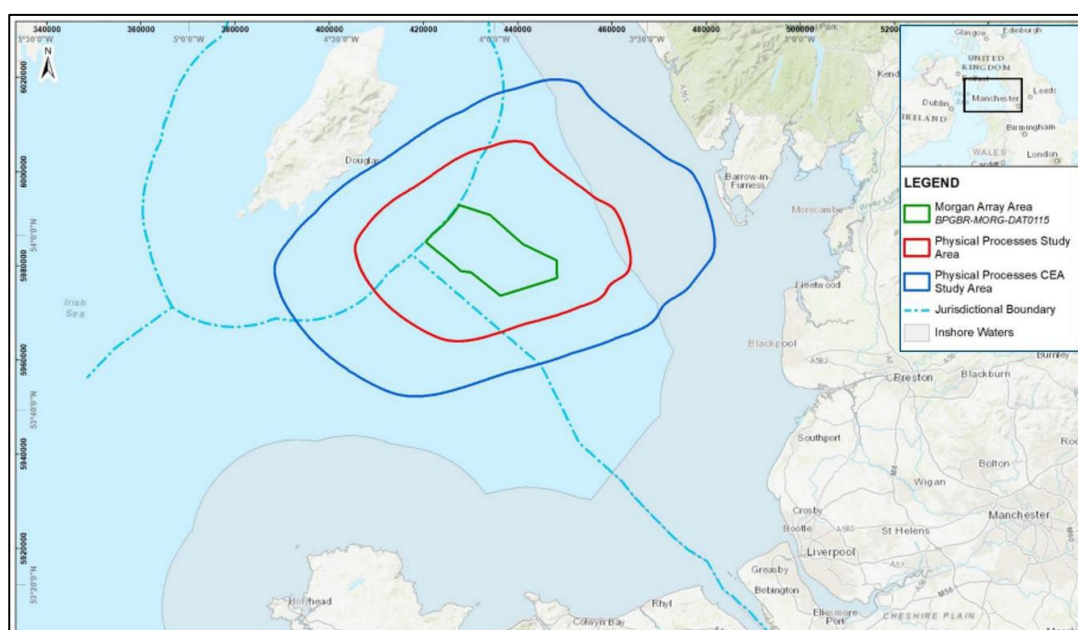
## THE APPLICATION

- 3.10.4. The Applicant's assessment of offshore physical processes and benthic subtidal ecology is set out in ES Volume 2, Chapter 1: Physical Processes [\[APP-013\]](#) and ES Volume 2, Chapter 2: Benthic Subtidal Ecology [\[APP-020\]](#). These chapters draw upon information contained within ES Volume 4, Annex 1.1: Physical Processes Technical Report [\[APP-033\]](#) and ES Volume 4, Annex 2.1: Benthic Subtidal Ecology Technical Report [\[APP-050\]](#).
- 3.10.5. The Applicant also notes that ES Chapter 1 should be read as part of the wider ES with particular reference to ES Volume 2, Chapter 3: Fish and Shellfish Ecology [\[APP-021\]](#), ES Volume 2, Chapter 4: Marine Mammals [\[APP-022\]](#), ES Volume 2, Chapter 8: Marine Archaeology [\[APP-026\]](#), and ES Volume 2, Chapter 9: Other Sea Users [\[APP-027\]](#).

### Baseline

For the physical processes assessment, the Applicant's study area is indicated in Figure 23 below and encompasses the Morgan Array Area and seabed that may be influenced by changes to physical processes due to the proposed development, defined as one spring tidal excursion (which is the distance suspended sediment is transported prior to being carried back on the returning tide). The physical processes modelling also identifies any potential impacts beyond the Morgan physical processes study area and this is shown on the Figure as the physical processes study area for the Cumulative Effect Assessment (CEA), which is defined as two spring tidal excursions (and which represents where the study area for adjacent projects and developments may intersect).

**Figure 23: Physical Processes Study Area<sup>31</sup>**



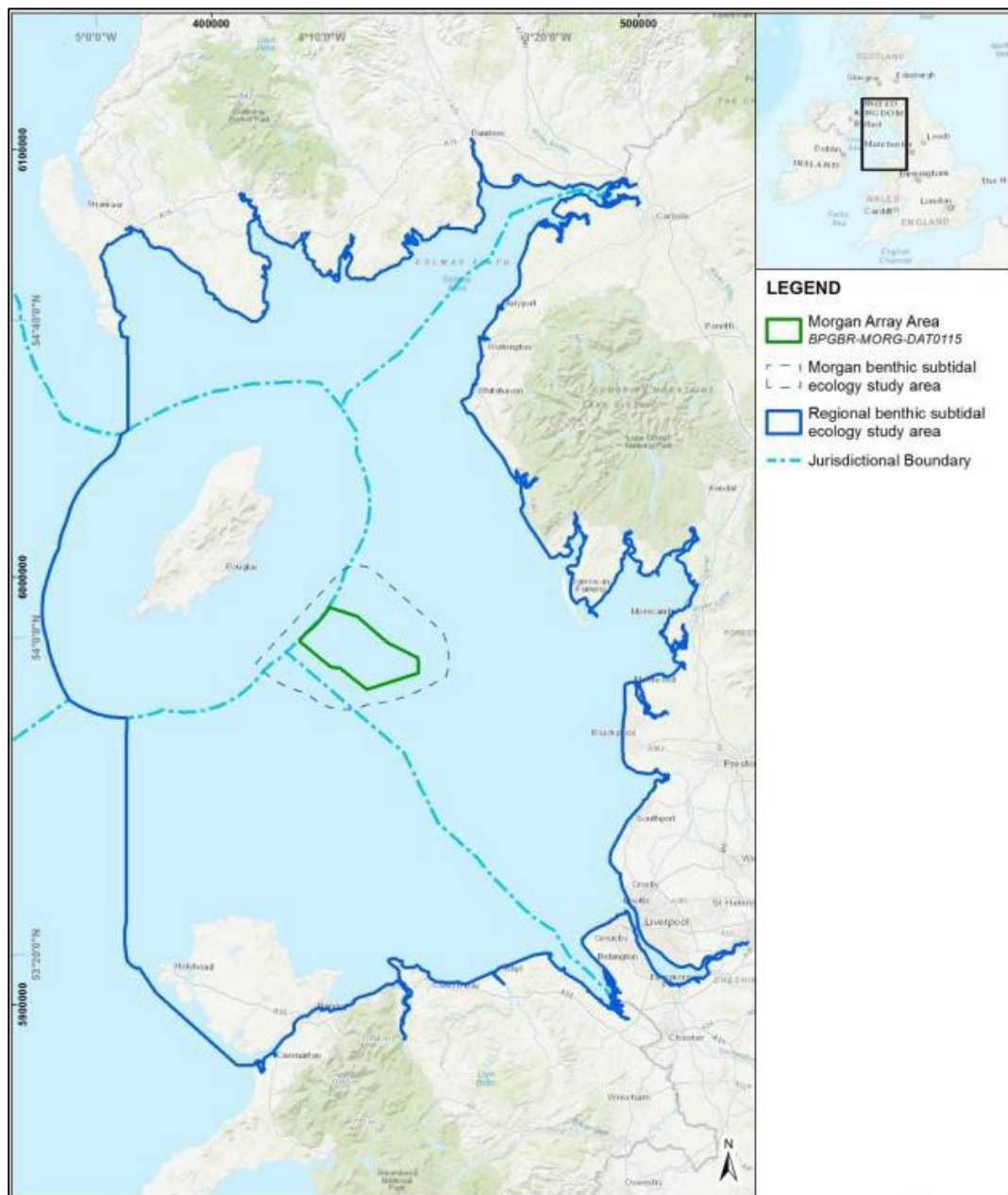
<sup>31</sup> Source: ES Volume 2, Chapter 1, Figure 1.2 [\[APP-013\]](#) - do not scale.



3.10.6.

The benthic subtidal ecology study area is indicated in Figure 24 below. It is defined as the area encompassing the Morgan Array Area and includes one tidal excursion around the Morgan Array Area referred to as the Zone of Influence (ZoI). This is the area within which the site-specific benthic baseline characterisation surveys have been undertaken. A regional subtidal ecology area has also been characterised by desktop data, encompassing the wider east Irish Sea habitats, which includes the neighbouring consented offshore wind farms and designated sites (notably the West of Copeland Marine Conservation Zone (MCZ) and the West of Walney MCZ). A further CEA study area, which has been defined as a 50km buffer around the Morgan Array Area is shown in Figure 2.6 in ES Chapter 2 [APP-020].

**Figure 24: Benthic Subtidal Ecology Study Area<sup>32</sup>**



<sup>32</sup> Source: ES Volume 2, Chapter 2, Figure 2.1 [APP-020] - do not scale.

- 3.10.7. Information on physical processes and benthic subtidal ecology within the study area was collected through desktop review of existing studies and datasets, site specific geophysical, geotechnical and environmental surveys, as agreed with the Joint Nature Conservation Committee (JNCC), Natural England and Natural Resources Wales (NRW) to determine bathymetry, characteristics of seabed sediment, seabed features, benthic communities (infauna and epifauna) and any environmentally significant habitats. The surveys employed the use of geophysical grab sampling, underwater video, Environmental Deoxyribonucleic Acid (eDNA), and sonar, multi-beam and sub-bottom profiler technology.
- 3.10.8. Key habitats recorded include mixed sediment supporting a range of species, such as catworms, sea urchins and amphipods, as well as coarse sediment habitats characterised by marine worms. Sandy mud and fine sand habitats were also identified in this area and were characterised by brittlestars, bristle worms, sea urchins and bivalves. The Applicant also identified that overlying these sediment-based communities are plant and animal assemblages comprised of larger, more mobile species, such as hermit crab, common starfish and brittlestars.
- 3.10.9. The seafloor morphology of the Morgan Array Area includes several distinct features such as sandwaves, megaripples, sediment waveforms and outcrops. The Applicant reports that the composition of these features is expected to be highly variable, but gravels and boulders are expected to be very common. Across the Morgan Array Area, the tidal current is reported to flow to the east-northeast and ebb to the west-southwest with sediment transport rates highest during spring tides.

#### **Potential Impacts Assessed by the Applicant**

- 3.10.10. The potential impacts assessed in ES Volume 2, Chapters 1 and 2 include:
- Temporary habitat loss/ disturbance (benthic)
  - Increase in suspended sediment concentrations (SSC) and associated deposition (physical processes and benthic)
  - Change to sediment transport and sediment transport pathways (physical processes)
  - Change to the tidal and wave regimes (physical processes)
  - Disturbance/ remobilisation of sediment bound contaminants (benthic)
  - Long term habitat loss (benthic)
  - Introduction of artificial structures (benthic)
  - Increased risk of introduction and spread of invasive non-native species (INNS) (benthic)
  - Electromagnetic field (EMF) and heat from subsea cables (benthic)
  - Change to temperature and salinity stratification (physical processes)
- 3.10.11. Primary mitigation measures to reduce these potential impacts include:
- Development and adherence to an Offshore Construction Method Statement (CMS), to include:
    - Details of scour protection
    - Cable burial as a preference or protection where burial not possible
    - Deposition of drilling arisings and/ or sandwave clearance in close proximity to the works to retain material within the sediment cell and maintain sediment transport regimes
    - Details to minimise sandwave clearance

- 3.10.12. In addition, the development of and adherence to an Offshore Environmental Management Plan (EMP) to include a biosecurity risk assessment, an INNS management plan and a marine pollution contingency plan is also proposed as a tertiary mitigation measure to protect the native benthic environment.
- 3.10.13. Overall, the Applicant concludes that there would be no residual significant effects to physical processes or benthic subtidal ecology arising from the Proposed Development during construction, operations and maintenance or decommissioning phases. As a result, the Applicant considers that no specific monitoring is required beyond that relating to maintenance activities (for example routine inspections of inter-array and interconnector cables, and asset integrity surveys of the foundations, the latter of which may allow for the identification of INNS).
- 3.10.14. Summaries of potential effects in each phase are presented below.

### ***Construction Phase***

- 3.10.15. The Applicant reports that increased SSCs may arise due to seabed preparation involving sandwave clearance, the installation of the wind turbine and Offshore Substation Platform (OSP) foundations and cable installation. Dredging and sandwave clearance may be required up to a diameter of 173m to accommodate seabed profiling but the Applicant reports that the clearance of material for a cable crossing through a typical sandwave represents less than 5% of the volume of the sandwave as a whole. In addition, the placement of dredged material to the southwest of the clearance operations is reported to aid sandwave recovery and is unlikely to affect the sandwave system as a whole. Notwithstanding, the Applicant reports that it is not possible to quantify the reformation rate of sandwave breaches with certainty, given the number of variables and dependencies, but in an area of active sediment transport with recharge material available, it is anticipated that in the months following installation infilling would become evident.
- 3.10.16. The Applicant also considers that sediment plumes that would be produced during construction would be localised and would not persist beyond the physical processes study area. In addition, sedimentation increase is not considered to be sufficient or significant enough to influence bathymetry of key receptors such as sandbanks, mudflats and sandflats. The overall effect of SSC and associated deposition to physical processes is reported as negligible adverse and not significant in EIA terms.
- 3.10.17. The installation of the infrastructure within the benthic subtidal ecology study area may lead to 61,422,400m<sup>2</sup> of temporary habitat loss/disturbance during the construction phase, equating to approximately 6.43% of the study area and is associated with sandwave and Unexploded Ordnance (UXO) clearance, jack-up events and cable installation. However, the Applicant reports that as the sediment type deposited on the seabed will be similar to that of the surrounding areas, benthic assemblages would be expected to recolonise these areas, such that the impact on subtidal habitat important ecological features (IEFs) would be of local spatial extent and highly reversible due to infilling. The significance of effect is therefore considered to be minor adverse. Subsequent maintenance activities and removal of cables/ foundations would result in some impacts to subtidal habitat IEFs but the Applicant reports that the significance of effect would remain the same due to the sensitivity of the IEFs.
- 3.10.18. The impact of suspended sediment on subtidal habitat IEFs is identified to be limited to those within the Morgan Array Area and Zol. The deposition plume from

sandwave clearance is expected to be most extensive when the deposited material is redistributed on successive tides, extending to a tidal excursion circa 20km from the site. For the inter-array cable installation, the plume envelope is predicted to be 33km in width with sedimentation of up to 50mm predicted at the trench site with depths reducing with increasing distance from the trench site. The plumes and sedimentation from inter-connector cable laying and foundation drilling is modelled to be much smaller. The significance of effect on subtidal habitat IEFs is reported as negligible, with the exception of the brittlestar beds IEF where the effect would be minor adverse, but not significant in EIA terms.

- 3.10.19. There is potential during certain conditions, namely flood tides coupled with wind from the south-west, for sediment plumes from construction activities to extend to the western edge of the West of Walney and West of Copeland MCZs; however, the Applicant considers that deposition would be *de minimis* and the significance of effect would be negligible.
- 3.10.20. In terms of disturbance of sediment contamination, levels of contamination of existing sediment across the Morgan benthic subtidal ecology study area were assessed to be low. As a result, the Applicant considers that adverse ecotoxicological effects are not expected from re-suspended sediments, and it reports the significance of effect would be negligible.
- 3.10.21. The Applicant also reports the potential for the introduction and spread of INNS from construction vessels and acknowledges that several INNS have been recorded along the English coast to the east of the Morgan Generation Assets and that killer shrimp and carpet sea squirt are of particular concern to designated sites in the Isle of Man (IoM). However, for subtidal habitat IEFs in the Morgan benthic subtidal ecology study area, the Applicant reports that the introduction of slipper limpet species (*C. Fornicata*) into the area could smother underlying bivalves in the 'subtidal coarse and mixed sediments with diverse benthic communities IEF', while the colonial ascidian (*D. vexillum*) has the potential to colonise and smother offshore gravel habitats. The Applicant records that the sensitivity of some of the subtidal habitat IEFs is high, but states that vessels used during the construction phase of the Proposed Development are likely to come from the region, such that the introduction of species from outside the region is unlikely, and that subject to adoption of the aforementioned mitigation measures the magnitude of effect is deemed to be low. Overall, the significance of effect is reported as minor adverse.

#### **Operational and Maintenance Phase**

- 3.10.22. The Applicant reports that the presence of infrastructure may lead to changes in impacts to the tidal regime, wave regime, sediment transport and associated sediment pathways and physical features. In addition, cable repair and reburial activities may lead to increases in SSCs. However, the Applicant reports that these changes would be limited and localised and the impacts on receptors would be of negligible significance. Specifically for the relevant qualifying interests of the West of Walney and West of Copeland MCZs, the Applicant reports that they may be potentially impacted indirectly by changes to the tidal and wave regimes due to the presence of infrastructure, which could influence sediment transport; however, the effect would be negligible adverse. In addition, none of the subtidal habitat IEFs in the benthic subtidal ecology study area are expected to be affected by changes in physical processes as a result of the presence of infrastructure.
- 3.10.23. It is also reported that long term habitat loss would occur directly under all wind turbine and OSP foundations, while the introduction of scour and cable protection

would also lead to habitat alteration. The Maximum Design Scenario for long-term habitat loss is reported as 1,309,252m<sup>2</sup>, representing 0.14% of the benthic subtidal ecology study area. The Applicant identifies that all subtidal ecology IEFs have high sensitivity to long term habitat loss, but as the loss would only affect a small proportion of the total area of these IEFs, the Applicant considers the integrity of these habitats and communities are unlikely to be compromised, and they could continue to perform their ecosystem function. As a result, it is considered that the significance of effect would be minor adverse.

- 3.10.24. The potential colonisation of foundations and scour and cable protection by new communities of organisms/ species may result in habitat alteration during the operations and maintenance phase, particularly during the removal of marine growth from the foundations and the potential deposition of this material on the seabed. However, the Applicant considers that the structures, along with the scour and cable protection will be colonised by epifaunal species already occurring in the ecology study area (for example tunicates, bryozoans, mussels and barnacles), such that there would be no significant impact on the prevailing sediment environment, but that there may possibly be a beneficial impact from increased biodiversity, species richness and species abundance, which in turn may provide greater foraging opportunities for some fish species.
- 3.10.25. Nonetheless, the Applicant also reports the potential for the introduction and spread of INNS from maintenance vessels, the colonisation of artificial structures and the potential deposition of encrusted growth during maintenance removal, which have the potential to release invasive species if the materials and equipment used in the process have not been properly cleaned after use at a previous location that may have had invasive species present. The risk though, is reported to be low considering the mitigation measures proposed. As a result, the Applicant reports that the effect would be minor adverse. This is unchanged for the decommissioning phase.
- 3.10.26. In relation to EMFs from subsea cables, subtidal habitat IEFs have the potential to be affected. The Applicant reports that inter-array and export cables buried between depths of 1-2m or protected by thick concrete mattresses or rock berms reduces the magnetic field at the seabed surface four-fold. However, the Applicant also reports that the minimum burial depth for cables will be 0.5m. The Applicant adds that based upon current research relatively little is known about the effects of EMFs on invertebrates such as those common in benthic communities, but the conclusion that the potential impact of EMFs is negligible is popular amongst the international community. As a result, the Applicant considers that the significance of effect would also be negligible. The Applicant reports the same conclusion for the effects of heat from subsea cables.

### ***Decommissioning Phase***

- 3.10.27. The Applicant considers that sediment disturbance during decommissioning would be considerably lower than for the construction phase (primarily as a result of no sandwave clearance and seabed drilling), while scour and cable protection is intended to remain in situ. Furthermore, and in the case of piled foundations, the Applicant reports that the piles would be cut off, thereby limiting disturbance of the seabed. The Applicant therefore concludes that the effects on physical processes and benthic subtidal ecology receptors would be negligible adverse and not significant in EIA terms.



- 3.10.28. Minor adverse significance of effect is reported however for benthic subtidal habitat IEFs as a result of the removal of hard substrates during decommissioning with the seabed returning to predominantly coarse and mixed sediments following the removal of wind turbine and offshore substation platform foundations. It is also reported that the removal would also result in localised declines in biodiversity due to the removal of any communities which had established themselves on the hard substrate. Nonetheless, the Applicant predicts that the areas of affected seabed would revert to their pre-construction state over time. The effect on subtidal ecology receptors from the removal of hard substrates is therefore reported as minor adverse, which is not significant in EIA terms.

### **Cumulative Effects**

- 3.10.29. The list of other projects, plans and activities considered within the CEA for physical processes and benthic subtidal ecology are presented in ES Chapter 1 Table 1.15 [APP-013] and ES Chapter 2, Table 2.26 [APP-020] respectively with the effects summarised in Tables 1.17 to 1.20 [APP-013] and Tables 2.28 to 2.34 [APP-020] respectively. The cumulative effects assessed were deemed to be of negligible or minor adverse significance of effect, which is not significant in EIA terms.

### **ISSUES CONSIDERED DURING THE EXAMINATION**

- 3.10.30. Natural England and the Marine Management Organisation (MMO) were the primary submitters of representations on physical processes and benthic matters during the Examination, although the Isle of Man Government Territorial Sea Committee (IoM TSC) raised concerns in its Local Impact Report (LIR) [REP1-047] regarding the potential introduction of INNS to the Manx Territorial Sea. There were several matters specifically relating to cable deployment and scour that persisted for Natural England (see [AS-015] and [AS-016]) and these are reported below. However, at the end of the Examination the MMO advised the ExA [REP6-081], [REP6-094] that all concerns regarding these impacts had been addressed by the Applicant, with the exception of chemicals risk management. These matters are discussed in more detail below.

### **Scour and secondary scour**

- 3.10.31. The matter of scour and potential need for scour protection around offshore infrastructure was a matter that featured during the Examination, particularly the Applicant's lack of a scour (and secondary scour) assessment, which was raised by Natural England and the MMO in their relevant representations (RR) ([RR-026] and [RR-020]). Both IPs suggested that the Applicant needed to provide an understanding of the qualitative impacts of scour and use of scour protection methods.
- 3.10.32. The Applicant stated [PD1-017] that no scour assessment had been carried out but explained that an assumption had been made for the worst-case scenario that scour protection would be used wherever scour would occur, reducing sediment release to negligible quantities. In terms of physical process, the Applicant stated that the assessment of potential changes to wave climate, tidal flow and sediment transport regimes included the provision of scour protection for all foundation types and locations, such that the assessment of impacts with scour protection absent was therefore scoped out. It noted that its approach was consistent with developments such as Awel y Môr and Hornsea Three OWFs whereby scour protection was included as standard within modelling studies and impact assessments as part of the in-built mitigation. The Applicant also noted that Morgan Generation Assets are

located within an area of active sediment transport which may reduce the equilibrium scour depth as there would be a consistent sediment supply.

- 3.10.33. The Applicant highlighted that the scour protection measures would be subject to engineering design to ensure they minimise as much as practical the occurrence of scour and therefore any impacts would relate only to residual/secondary scour. However, the limited geographical extent of secondary scour meant that any impact would be insignificant, hence why an assessment of secondary scour had not been undertaken. It added that the detail of design, construction and scour protection measures would be outlined and approved in the Offshore CMS, which is secured in condition 20(1)(d) of the draft deemed marine licences (DMLs) [\[REP7-007\]](#).
- 3.10.34. The ExA further explored the prospect of secondary scour with the Applicant and IPs through ExQ1 MP 1.5 [\[PD-004\]](#). The Applicant responded [\[REP3-006\]](#) by repeating the information provided in [\[PD1-017\]](#) but added that the Offshore In-Principle Monitoring Plan (IPMP) [\[REP6-053\]](#) outlined that during the operations and maintenance phase of the project both engineering monitoring for asset security and environmental monitoring would be undertaken. As such, routine inspections would be made of cable and scour protection and, if secondary scour were to be identified, remedial works may be undertaken to both mitigate environmental impacts and to provide asset security.
- 3.10.35. Natural England advised [\[REP3-048\]](#) that all projects have a risk of secondary scour, but from the information presented the impacts would be potentially insignificant from a nature conservation perspective. Nevertheless, it is likely that during the operational period there would be a requirement for further scour prevention to be placed on the seabed and removal at the time of decommissioning. Natural England stated in its closing Risk and Issues Log [\[REP6-100\]](#) (log numbers D16 and G8) that the Applicant's proposal to provide the detail in the Offshore CMS developed in consultation with the MMO was insufficient to resolve this issue.
- 3.10.36. The MMO stated that it was aware that secondary scour in some wind farm locations had been greater than in others but it could not draw further conclusions for the Proposed Development [\[REP4-041\]](#). However, the MMO [\[REP2-029\]](#) accepted that the scour protection would depend on the foundation type, which has not yet been determined and it was content that it would be consulted on and have the determination of the final CMS. The MMO also subsequently confirmed that the Applicant's response to ExQ1 MP 1.5 and its proposed course of action was reasonable, that all its concerns regarding coastal processes had been addressed, and that assuming the scour is localised and minimal, the associated impacts on benthic receptors would also be negligible [\[REP5-056a\]](#).

*ExA consideration on scour and secondary scour*

- 3.10.37. For potential scour, which itself could result in sediment transfer, the ExA notes that the Applicant has made the assumption for the worst-case scenario that scour protection would be used wherever scour would occur, reducing sediment release to negligible quantities. The ExA accepts this, and as such is content that a specific scour assessment is not required.
- 3.10.38. Likewise, the ExA is persuaded by the Applicant's evidence that it is likely that the extent of any potential secondary scour would be limited and that any associated sediment transfer or SSC caused by secondary scour would also be of a minor nature. The ES ([\[APP-013\]](#), paragraph 1.9.5.5 and [\[APP-020\]](#), paragraph 2.9.9.10) predicts that it is likely that any secondary scour effects associated with scour

protection would be confined to within a few metres of the direct footprint of that scour protection material. No substantive evidence has been submitted to the contrary. The ExA was also not made aware of any guidance on or information/ data upon which to base an assessment of secondary scour or to estimate its potential scale.

- 3.10.39. Therefore, the ExA is content that there has not been a secondary scour assessment submitted. In addition, and despite the fact that there is no active monitoring of secondary scour proposed in the IPMP as alluded to by the Applicant in [\[REP3-006\]](#), the ExA is nevertheless content that during the operations and maintenance phase of the project routine inspections will be made of cable and scour protection in line with the outline Offshore Operations and Maintenance Plan [\[REP6-049\]](#), the outline Offshore CMS [\[REP4-032\]](#) and the Commitments Register (Co22 and Co28 [\[REP6-051\]](#)), such that if secondary scour is identified remedial works may be undertaken (within the parameters of this Application) to both mitigate environmental impacts and to provide asset security.

### **Decommissioning**

- 3.10.40. Natural England stated in its RR [\[RR-026\]](#) that it had concerns that the Applicant had not committed to endeavouring to return the seabed to its original state at the end of the Proposed Development's lifetime and that it should consider using scour and cable protection which is more readily removable at the time of decommissioning. It was concerned that the ES reported that "*protection would preferably be left in situ*" and that the Applicant had not had regard to Natural England's Cable Protection Advice Paper (included within Appendix F, Annex 1 of its RR). It argued that regardless of the Proposed Development being outside designated sites, the Applicant should aim to remove infrastructure to avoid irreversible (permanent) habitat loss. Natural England was also concerned that the Applicant had not produced an outline decommissioning plan.
- 3.10.41. The Applicant's position [\[PD1-017\]](#) was that it was its intention to secure decommissioning activities through a separate standalone marine licence. Nonetheless, in response to Natural England's unwavering position on the use of removable scour and cable protection the Applicant updated its Commitments Register [\[REP4-025\]](#) to state it would give consideration to the use of cable and scour protection which is of such a nature that it may be more readily removable at decommissioning (Commitment Numbers Co22 and Co25).
- 3.10.42. Natural England's final position on that update was that the wording in Co22 and Co25 was not strong enough to secure a commitment and only use of the words "*will be removed*" would suffice [\[AS-015\]](#), [\[AS-016\]](#). Natural England also submitted for a second time its cable protection advice paper [\[REP6-099\]](#) and maintained its objection to the lack of an outline decommissioning plan.
- 3.10.43. The ExA pursued the lack of outline decommissioning plan with the Applicant through ExQ1 GEN 1.21 [\[PD-004\]](#) and asked the MMO for its opinion in ExQ1 DCO 1.13 on whether the production of an outline Offshore Decommissioning Plan should be secured by condition in the draft DMLs.
- 3.10.44. The Applicant held that it was not necessary for the production and approval of an outline decommissioning plan to be secured pursuant to the consenting process under the Planning Act 2008 (PA2008), as the decommissioning process for offshore renewable energy installation farms is controlled by the Energy Act 2004 [\[REP3-006\]](#) which was reflected in the wording of R10 of the draft development

consent order (DCO). The Applicant therefore considered that it was not necessary to duplicate the Energy Act regime through consents issued under the PA2008. The Applicant maintained that position at the close of the Examination highlighting that it was entirely consistent with other made Orders, not least East Anglia One North OWF Order 2022, East Anglia Two OWF Order 2022, and Awel y Môr Offshore Wind Farm Order 2023 [\[REP6-014\]](#), [\[REP7-004\]](#).

- 3.10.45. The MMO advised the ExA that it was reviewing decommissioning processes for NSIPs and the requirement for Applicants to submit an outline plan in a new standard DML condition, but that was a piece of ongoing work which had not been concluded. Nonetheless, it added that while a new marine licence would be required for decommissioning, it would be beneficial for an outline plan to be submitted with the Application [\[REP3-037\]](#). The ExA further questioned the MMO in ExQ2 DCO 2.8 [\[PD-009\]](#) for an update on the suggestion for a new DML decommissioning condition.
- 3.10.46. The Applicant was also asked at ISH2 [\[EV5-012\]](#) to comment on the MMO's submissions and it stated that the MMO's response to ExQ1 GEN 1.21 was the first notice that it had had about a potential new standard DML decommissioning condition [\[REP4-006\]](#) but that for reasons already stated such a condition would be unnecessary. The Applicant also noted that such a condition could cause some difficulties for developers if the SoS and the MMO disagree as to what is acceptable in a decommissioning plan. It added that such a position could create complication in reconciling the SoS's legislative role under the Energy Act 2004 and the MMO's regulatory role under the terms of the DML, causing unnecessary complication where the SoS is already in control of the decommissioning process.
- 3.10.47. The MMO advised in its closing statement that decommissioning activities had not been fully considered and that an outline decommissioning plan should be part of the consenting process, or at the very least a commitment should be secured within the Commitments Register to enable the MMO to review the decommissioning programme and all updated programmes prior to submission to the SoS as part of R10 of the draft DCO [\[REP6-094\]](#). The same points were made in the MMO's final statement of common ground (SoCG) [\[REP6-081\]](#) but the status of the matter was recorded as not agreed, but not material.
- 3.10.48. The Applicant opposed the MMO's suggestions in its closing statement [\[REP6-014\]](#). It also reiterated that while it would seek to reduce environmental impacts by only using scour protection and cable protection where absolutely necessary and that it would consider using removable scour and cable protection, its decisions would be based in the first instance on prioritising asset integrity and fulfilling the safety requirements to protect the assets. The Applicant also added that the prescribed use of removable scour/ cable protection, or its removal, was not standard industry practice and has never been a requirement for offshore wind projects which are not located within a Special Area of Conservation.
- 3.10.49. Finally Meath County Council, who submitted a representation in relation to transboundary issues [\[OD-006\]](#) suggested that in line with mitigation measures required for wind farm project developers in the west Irish Sea, the Applicant should be required to have *"a Rehabilitation Schedule supported by a decommissioning bond. Its purpose is to ensure there are suitable plans/ protocol in place for the end-of-life/ decommissioning phase of the projects."*
- 3.10.50. The Applicant's response [\[REP1-006\]](#) stated the position it subsequently held throughout the Examination, that the decommissioning process is controlled by the

Energy Act 2004 and that the scope of the decommissioning works would be determined by the relevant legislation and guidance at the time of decommissioning.

***ExA considerations on decommissioning***

- 3.10.51. The ExA appreciates the concerns of the MMO and Natural England regarding the lack of an outline decommissioning plan, however, it notes that decommissioning is controlled under the requirements of the Energy Act 2004. As such, it is not considered necessary or appropriate to duplicate this through a condition on the DMLs.
- 3.10.52. In addition, decommissioning will take place many decades from now and the ExA considers that it is entirely feasible that the MMO and statutory nature conservation body attitudes on the need to remove and the impact of removing infrastructure from the seabed may evolve over time. Indeed, throughout the Examination there was acknowledgment from the parties that artificial structures and cable/ scour protection could result in possible biodiversity benefits from colonisation of their surfaces, such that their removal at decommissioning may not be desirable.
- 3.10.53. Overall, the ExA is satisfied that decommissioning has been sufficiently assessed in the ES in terms of impacts and maximum design scenarios and that the Applicant has committed to employing best endeavours in the Commitments Register to using removable cable and scour protection if it is required in the future. This is considered to be sufficient at the present time.

**Deployment period for cable protection**

- 3.10.54. Natural England submitted in its RR that the DCO should include a condition to secure that no cable protection could be deployed later than 10 years post construction, and that any further cable protection after that time should require a new Marine Licence [\[RR-026\]](#). It stated that this is due to the natural variability of the marine environment and the potential for important ecological habitats to appear over time.
- 3.10.55. As noted above, Natural England submitted a cable protection advice paper with its RR and again at D6 to support its position [\[REP6-099\]](#). This matter persisted throughout the Examination and was maintained as not agreed, material impact in Natural England's final Principal Areas of Disagreement Summary Statement (PADSS) [\[AS-015\]](#). However, Natural England advised that the matter could be resolved if the Applicant could align with its advice and secure the commitment.
- 3.10.56. The Applicant maintained throughout the Examination that there was no reasonable basis on which to impose a time limit on the activities authorised by the DMLs in the manner suggested by Natural England [\[PD1-017\]](#), [\[REP3-006\]](#), [\[REP4-009\]](#), [\[REP5-015\]](#), [\[REP6-014\]](#). It also considered that the cable protection advice paper focused predominantly on Marine Protection Areas (MPA), which was not pertinent to the Proposed Development as it would not spatially overlap with any MPA.
- 3.10.57. When asked in ExQ1 DCO 1.17 [\[PD-004\]](#) to comment in detail on Natural England's request the Applicant briefly advised that it had included all reasonably predictable operations and maintenance activities within the application and had undertaken a robust and precautionary assessment of the potential impacts within the ES [\[REP3-006\]](#). In addition, and to ensure that it only carries out what it had assessed and had applied for, the Applicant advised that it had updated the DMLs [\[REP7-007\]](#) to include maximum cable protection areas and volumes that could be deployed across the lifetime of the project.



- 3.10.58. The Applicant also submitted an outline CMS (incorporating an Outline Cable Specification and Installation Plan) (CSIP) at D4 [\[REP4-032\]](#) which outlined that a final CSIP would be produced post consent (to be approved by the MMO in accordance with DML condition 20(1)(d)) which would set out where cable protection would be required and the details of cable protection management. It also updated the outline Offshore Operations and Maintenance Plan (OOMP) [\[REP6-049\]](#) to include maximum parameters of seabed disturbance area for future cable repairs and stated that:

*Where cable protection is required to be removed prior to repair, it shall be replaced in the same location, in accordance with the maximum design parameters set out in Volume 1, Chapter 3: Project description (S\_D6\_18).*

- 3.10.59. As noted, those updates did not assuage Natural England.

- 3.10.60. In other responses to submissions made by the Scottish Fishermen's Federation regarding impacts of cable protection on fishing vessels (discussed in sections 3.6 and 3.11 of this Report) the Applicant highlighted its preference to bury cables where possible to a target depth of 1m for interconnector cables and 2m for inter-array cables, with a maximum burial depth of 3m and minimum burial depth of 0.5m for both [\[REP2-005\]](#). However, where burial may not be possible, and cable protection may be required, the Applicant noted that cable protection could not go beyond the limits assessed in relevant chapters of the ES and was controlled as such by condition 10 of the DMLs. It clarified that those limits are based on up to 10% and 20% of total cable length being protected for inter-array cables and interconnector cables respectively, such that the Applicant would not be able to exceed those limits without variation to the DMLs.

***ExA considerations on deployment period for cable protection***

- 3.10.61. The ExA notes that the Applicant has used best endeavours to clarify the maximum volume and extent of cable protection that may be required and has included those parameters within its ES and DML conditions. The ExA also notes that a final CSIP will contain more detail for the MMO's approval and that condition 30 of the DMLs requires the Applicant to report to the MMO the location and volume of cable protection within four months of completion of the construction of the development. In that regard, the ExA is content that there are sufficient controls over cable protection deployment in the short term.
- 3.10.62. Nonetheless, the ExA is concerned that it is difficult to fully assess the impacts that may occur longer term and remedial cable protection works could occur in areas where no protection has previously been present. It is entirely feasible that during routine maintenance of cable burial in say 15 years' time it is identified that new cable protection may be required. If that protection does not fall outside the parameters considered in this application (notably 10% and 20% of total cable length for inter-array cables and interconnector cables respectively), then it could be introduced without any further environmental assessment or marine licence, yet there could be potential impacts on benthic ecology and physical processes (as well as on commercial fisheries).
- 3.10.63. The ExA is therefore persuaded by Natural England's advice paper that the deployment of cable protection several years after the ES data was collected should be assessed again using up to date information on which to base the assessment. As a result, the ExA recommends inclusion of an additional DML condition specifying that any cable protection authorised under this licence must be deployed

within 10 years from the commencement of the authorised scheme unless otherwise agreed in writing with the MMO.

- 3.10.64. The ExA notes that similar conditions have been included in the recently granted Rampion 2 OWF Order 2025, the Hornsea Three OWF Order 2020 and the Hornsea Four OWF Order 2023. While the ExA appreciates that the Proposed Development does not overlap a MPA, a Special Area of Conservation or a MCZ (which may have been the case in those examples), it remains that seabed habitat can change over time, and placing hard protection on the seabed not only creates new habitat but also modifies or removes existing habitat.
- 3.10.65. Therefore, new cable protection that may be required some way into the future should be qualified by up-to-date seabed habitat data to ensure that the most suitable type of cable protection material is deployed and that environmental impact is minimised. Indeed, and as noted in ES Chapter 2 [REP6-028, paragraph 2.9.6.16], studies have shown that for artificial hard substrate to be colonised by a benthic community similar to that of the baseline, its structure should resemble that of the baseline habitat as far as possible. The ExA therefore considers that any new cable protection required in the future operational phase should be assessed against the baseline existing at the time.
- 3.10.66. The following sub paragraph will be included in DML condition 30 of schedules 3 and 4 of the recommended DCO:
- 30 (3) Any cable protection (other than the replenishment or replacement of existing cable protection) authorised under this licence must be deployed within 10 years from the date on which operation of the authorised project commences unless otherwise agreed by the MMO in writing.*
- 3.10.67. For the avoidance of doubt, the ExA is not suggesting that new cable protection later than 10 years after operation commences should not be permitted over the lifetime of the project (for indeed protecting the integrity and safety of the asset is a significant consideration), rather that it should be reasonably assessed by the licensing authority in consultation with the statutory nature conservation body at the time.

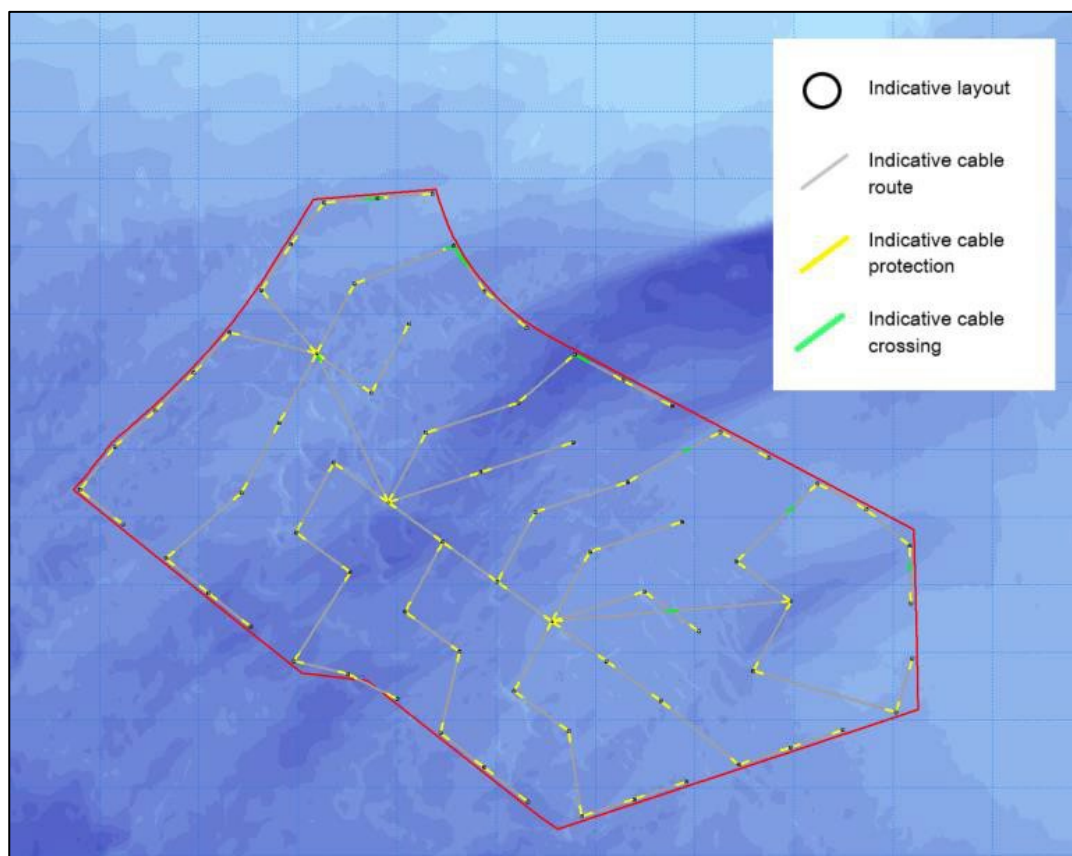
### **Cable crossings**

- 3.10.68. Natural England noted in its RR that there was limited information submitted by the Applicant pertaining to cable crossings (in terms of locations, volume of cable protection in relation to crossings and impacts from sediment plumes), having noted that in Table 1.13 of ES Chapter 1 [APP-013] the Maximum Design Scenario (MDS) parameters state there may be up to 10 cable crossings. Natural England maintained its request for further detail on the cable crossing design parameters and impact assessment, including indicative cable crossing locations, throughout the Examination in log numbers D8 and F7 of its Risks and Issues Log [REP6-100]. It stated that if the Applicant were to identify the crossing locations in its outline Offshore CMS then the matter could be resolved. Its final Risk and Issues Log retained an amber status, unresolved and material consideration.
- 3.10.69. The Applicant submitted [PD1-017] that cable crossings had been included on a precautionary basis, thus the locations (if required) would not be known until detailed design stage but would be specified prior to construction in the CSIP, which is secured by condition 20(1)(d)(i) and (ii) of the draft DMLs. It added that the resulting increase in SSCs would be minimal and that it was confident that the impacts from sediment plumes during installation of cable protection was covered

by the MDS and assessment for increased SSC and associated deposition in ES Chapters 1 and 2 [APP-013] and [APP-020].

- 3.10.70. The Applicant reiterated at D4 that it is not anticipated that cable crossings would be required as there are no recorded existing cables within the Morgan Array Area. However, it noted that indicative cable crossings were shown in Figure 1.65 of ES Volume 4, Annex 1.1 Physical Processes Technical Report [APP-033] (see Figure 25 below), which was used to inform the physical processes and benthic ecology assessments.

**Figure 25: Indicative Cable Crossings<sup>33</sup>**



- 3.10.71. The Applicant confirmed that the representative locations shown in that figure were selected to represent the MDS for changes to physical processes particularly will regards to considering the potential for impacts on neighbouring MCZs. The Applicant stated that it was confident that the MDS for the impact of cable crossings on both physical processes and benthic subtidal ecology had been assessed.
- 3.10.72. In its closing statement [REP6-014] the Applicant stated that Natural England had ignored the reality that it is not possible for any cable crossing locations to be confirmed at this stage but that the Applicant had assessed the need and impact of cable crossings appropriately. The Design Parameters specified in R2 of schedule 2 of the draft DCO [REP7-007] includes a maximum number of 20 cable crossings (10 inter-array cable crossings and 10 inter-connector crossings).

<sup>33</sup> Source: ES Volume 4, Annex 1.1, Figure 1.65 [APP-033] - do not scale.

### **ExA considerations of cable crossings**

- 3.10.73. The ExA is satisfied that the Applicant has considered the possibility of cable crossings and included a maximum number in MDS assessments in the ES. The ExA is also satisfied that final details will be identified in the CSIP, which will need to be approved by the MMO. Whilst the ExA appreciates Natural England's desire for certainty of location to provide certainty of impact and effect, it is not feasible for the cable crossing information to be clarified until the final design and layout has been determined, which will be informed by additional pre-construction surveys. The ExA considers this to be a suitable course of action.

### **Securing mechanisms for a chemicals risk assessment**

- 3.10.74. Condition 20(1)(e) of the draft DMLs submitted for Examination [[APP-005](#)] stated that prior to commencement of any licensed activity an offshore environmental management plan covering the period of construction and operation to include details of ... *"(ii) a chemical risk assessment, including information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance shall be submitted to and approved in writing by the MMO."*
- 3.10.75. Condition 18(1) of the draft DMLs also stated that *"unless otherwise agreed in writing by the MMO, the carriage and use of chemicals in the construction of the authorised scheme must comply with the International Convention for the Prevention of Pollution from Ships."*
- 3.10.76. In addition, condition 18(2) stated that *"the undertaker must ensure that any coatings and treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by the Health and Safety Executive and the Environment Agency Pollution Prevention Control Guidelines."*
- 3.10.77. At the outset of the Examination the MMO advised that mitigation and monitoring should include notification to the regulator where there is potential for chemicals used in the construction, operation, maintenance and decommissioning phases of the offshore windfarm to have a pathway to the marine environment. That notification should include those chemicals used within closed systems that require frequent top up, and full details of the risk and justification for use of those chemicals should also be provided [[RR-020](#)]. Furthermore, it stated that in line with OSPAR<sup>34</sup> guidance, properties of the chemicals paints and coatings used should be notified to the MMO for approval prior to use [[REP2-029](#)].
- 3.10.78. The Applicant noted [[PD1-017](#)] that an Offshore EMP would be developed post-consent, to include details of a chemical risk assessment, that shall include information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance, as secured in condition 20(1)(e) of the draft DMLs. It also referred to condition 18(2) as evidence of compliance with relevant standards [[REP3-004](#)] suggesting that sufficient controls were contained within the draft Order.

---

<sup>34</sup> [OSPAR](#) is the mechanism by which 15 governments and the European Union cooperate to protect the marine environment in the North-East Atlantic. OSPAR is so named because of the original Oslo and Paris Conventions ("OS" for Oslo and "PAR" for Paris).

- 3.10.79. The MMO subsequently advised [\[REP5-056a\]](#) that it had reviewed the Offshore EMP and found that the document was suitable for the Applicant's aims. Nonetheless, it recommended that condition 18(1) be replaced with the following:
- Unless otherwise agreed in writing by the MMO, all chemicals and substances, including paints and coatings, used below MHWS for the undertaking of the licensed activities must be approved in writing by the MMO prior to use. Submission for approval to the MMO must take place no later than ten weeks prior to use, unless otherwise agreed by the MMO in writing.*
- 3.10.80. The ExA discussed this with the Applicant at ISH3 [\[EV6-009\]](#) and was advised that it was not necessary to diverge from a consistent approach that had been adopted in other marine licenses to now include a catch all chemicals condition. The Applicant added that the condition included in the draft DMLs aligned with previous precedent and made reference to a relevant international convention. It stated that it disagreed with the MMO's suggested replacement as it would require every single chemical that would be used in the construction of the wind farm to be approved by the MMO.
- 3.10.81. In its closing statement at D6 [\[REP6-014\]](#) the Applicant repeated its position adding that the MMO's suggested condition would impose unreasonable obligations on the undertaker post-consent. It also reiterated that the revised condition would require all chemicals and substances to be submitted for approval, irrespective of whether there is a pathway for them to enter the marine environment or cause harm. The Applicant was concerned that the level of detail sought would be very difficult to obtain in practice from contractors and could foreseeably result in a delay to the project schedule. This was not considered proportionate to the risk it seeks to address, particularly when it was argued that the existing condition serves the same purpose.
- 3.10.82. The MMO at D6 [\[REP6-094\]](#) repositioned itself and suggested that condition 18(1) of the DMLs should be removed and condition 20(1)(e) should be amended to include a specific chemical risk assessment for all chemicals that have a pathway to the marine environment (with a specific reference to OSPAR). Additional terminology to be included in the interpretation section of the DMLs was also put forward. The MMO pointed out that previously consented offshore wind farms were inconsistent in the way they submitted chemical information to the regulator so it was now requesting more information beyond the standard chemical risk assessment and within a timeframe of no later than 10 weeks prior to use (8 weeks for consulting the Centre for Environment, Fisheries and Aquaculture Science (Cefas) and 2 weeks for the MMO to review the response).
- 3.10.83. Given the advanced stage of the Examination with no further timetabled opportunity for the Applicant to comment on the suggested revisions to the DML conditions, the ExA issued a Rule 17 request for further information from the Applicant and the MMO on this matter [\[PD-012\]](#).
- 3.10.84. The MMO confirmed at D7 [\[REP7-016\]](#) that notwithstanding its previous position in [\[REP5-056a\]](#) to replace condition 18(1) with revised wording, it now sought the deletion of condition 18(1) from the DML in its entirety and its replacement with its suggested revisions to condition 20(1)(e) as that would allow for more detail to be provided for chemicals that have a pathway to the marine environment.
- 3.10.85. The Applicant expressed dissatisfaction with the MMO's suggested changes at the last scheduled deadline of the examination process and advised that it had not been



able to confirm agreement with the MMO [REP7-004]. However, the Applicant deleted Condition 18(1) in its final draft DCO and stated it had amended condition 20(1)(e)(ii) [REP7-006, tracked version] to specify that the chemicals risk assessment would accord with recognised best practice guidance ‘*and standards*’. It also stated it had included additional wording in condition 13(3) to ensure a chemical risk assessment would be included as part of the OOMP to be approved under that condition, to address the MMO’s request that a chemical risk assessment is provided for both the construction phase and the operations and maintenance phase.

- 3.10.86. The issue was unresolved at the close of the Examination [REP6-081] (SoCG: MMO.MP.15).

***ExA considerations on securing mechanisms for a chemicals risk assessment***

- 3.10.87. With regards to the MMO’s recommended change to condition 20(1)(e) of the draft DMLs, it is accepted by the ExA that the MMO aims to appropriately safeguard the marine environment from harmful chemicals and that it has provided sufficient justification for its proposals. Whilst the ExA appreciates the frustration of the Applicant that this revision was raised very late in the Examination with little time to properly consider its terms and effects, it considers that that is not sufficient reasoning for rejecting the MMO’s advice.

- 3.10.88. As such, the ExA includes in its recommended DCO a revision to Condition 20(1)(e) as follows as a new sub paragraph (iii), with subsequent renumbering of the existing sub paragraphs:

*20(1)(e)(iii) a chemical risk assessment for all chemicals that have a pathway to the marine environment used for the marine licensed activities, outside the course of normal navigation, and are not present on the OSPAR List of Substances Used and Discharged Offshore which Are Considered to Pose Little or No Risk to the Environment (PLONOR) to be submitted to the MMO for approval no later than ten weeks prior to use of the chemicals and to include details of —*

*(aa) the function of the chemical;*

*(bb) the quantities being used and the frequency of use;*

*(cc) the physical, chemical, and ecotoxicological properties;*

- 3.10.89. The ExA considers that the inclusion of this additional condition (and the additional terminology put forward by the MMO for inclusion in the interpretation section of the DMLs) will allow for more detail to be provided for chemicals that have a pathway to the marine environment but which are not already included in the aforementioned OSPAR list; it is also a matter that is not covered elsewhere in the DMLs.

- 3.10.90. The ExA notes the Applicant’s argument that a broader condition than that already included in its draft DMLs would require every single chemical that would be used in the construction of the wind farm to be approved by the MMO, but the MMO has made clear that the new sub paragraph to condition 20(1)(e) (as drafted above) would exempt fluids used within gears and machinery (closed systems) from requiring a more detailed chemicals risk assessment, and disregards chemicals used on vessels and accommodation type chemicals (bleaches/toilet cleaners/grey water etc.), which are covered by alternative regulations. The ExA is therefore satisfied that the revised condition would not impose unworkable obligations on the undertaker post-consent.

- 3.10.91. Regarding the Applicant's D7 revisions to draft condition 13(3) of the draft DMLs, the ExA does not consider it necessary for this condition to include the requirement for a chemical risk assessment to be provided as part of an OOMP. The ExA notes the Applicant's explanation that the amendment is to ensure that chemicals control is also managed in the maintenance period, but it also notes that the outline Offshore EMP [\[REP4-018\]](#) states at paragraph 1.1.1.2 that its purpose is to provide a consolidated document which encompasses the various environment and consents commitments made by the Applicant for the construction and operations and maintenance phases. Therefore, the requirement for a chemical risk assessment to also be included in an OOMP creates duplication of provisions in the EMP and/ or potential for inconsistency between the control documents. The ExA therefore removes the words "*and including a chemical risk assessment*" from draft DML condition 13(3) in its recommended DCO.

### **Risk of introducing invasive non-native species (INNS)**

- 3.10.92. As noted above, the IoM TSC raised concerns in its LIR [\[REP1-047\]](#) regarding the potential introduction of INNS to the Manx Territorial Sea, with particular concern regarding *Didemnum vexillum* (carpet sea squirt) and *Crepidula fornicata* (slipper limpet). It noted that whilst the significance of effect was assessed as minor adverse that would be dependent on following the EMP and the INNS Management Plan both of which were only due to be produced post consent. Given the proximity of the Proposed Development to the Manx Territorial Sea, the IoM TSC considered it essential that the IoM is consulted and fully involved in these plans. It also noted that there was no proposed specific monitoring for INNS.
- 3.10.93. In response to these concerns, the Applicant updated its IPMP at D2 [\[REP2-014\]](#) [tracked version] to include the monitoring of INNS as described in section 2.9.12 of ES Chapter 2 [\[APP-020\]](#). This monitoring would include use of scheduled pre and post construction surveys to include ecological monitoring such as reviewing any suitable drop down video (DDV) data available for the identification of INNS. This was confirmed as agreed in the D3 SoCG between the two parties [\[REP3-027\]](#).
- 3.10.94. Notwithstanding, the MMO advised that the presence of cryptic INNS (in other words the invasion of non-native species that goes unnoticed due to misidentification as a native) would not be adequately assessed through review of that imagery alone [\[REP2-029\]](#). It added that should INNS be identified during review of the imagery, the Applicant should consider the collection of samples to firstly confirm species identification and secondly to understand the fouling assemblage more fully to include cryptic INNS [\[REP3-037\]](#).
- 3.10.95. The ExA explored this matter with the Applicant through ExQ1 MP 1.7 [\[PD-004\]](#). The Applicant reiterated that as no significant effect was identified for the increased risk of introduction and spread of INNS no monitoring was considered to be required. Therefore, the agreement to monitor INNS through DDV was a proactive measure. The Applicant also advised [\[REP3-004\]](#) that it would commit to considering the feasibility of collecting samples, although it noted that the feasibility of the collection of such samples would be dependent on the technical specifications of the equipment available at the time to undertake the surveys, as well as health and safety considerations. The ExA pursued this suggested commitment through ExQ2 MP 2.1 [\[PD-009\]](#) and the Applicant subsequently made changes to the IPMP and the Commitments Register (Co89 and Co90) at D5 to secure adaptive measures [\[REP5-043\]](#) and [\[REP5-030\]](#) (tracked versions).

### **ExA considerations of risk of introducing INNS**

- 3.10.96. The ExA is satisfied that the matter was resolved during the Examination to the satisfaction of the IPs. The ExA considers that with the development of and adherence to an Offshore EMP (secured in condition 20(1)(e) of the draft DMLs) to include a biosecurity risk assessment, an INNS management plan and a marine pollution contingency plan, the potential for introducing INNS from the introduction and presence of artificial structures and vessel trips during all phases of the Proposed Development would be minimised. The ExA also considers that the additional monitoring measures secured in the IPMP and the Commitments Register (which are certified documents in schedule 5 of the draft DCO) would provide further protection for the native benthic environment.
- 3.10.97. Finally, the ExA notes and is content that the MMO has included within its internal system the requirement to consult the IoM on the EMP should consent be granted (MMO response to ExQ1 DCO 1.24 [\[REP3-037\]](#)).

## CONCLUSIONS

- 3.10.98. The ExA is cognisant of the fact that not all matters related to benthic subtidal ecology and physical processes were able to be agreed between the Applicant and Natural England at the close of the Examination. However, with regard to the MMO, the ExA appreciates the MMO's confirmation that all concerns (with the exception of chemicals risk) have been suitably addressed by the Applicant [\[REP5-056a\]](#) and all matters within their SoCG are agreed [\[REP6-081\]](#).
- 3.10.99. The ExA concludes that while there would be some minor adverse effects due to the Proposed Development through the disturbance and preparation of the seabed and the need for cable and scour protection, the ExA broadly agrees with the Applicant's assessment of these matters and conclusions through the ES. The Applicant commits to using best endeavours to bury cables and minimise the need for cable crossings, it also proposes to monitor sandwave recovery, the introduction and/or spread of INNS and the colonisation of novel hard structures as part of an evidence building programme (in line with NPS EN-3 paragraphs 2.8.221, 2.8.295 and 2.8.234), which is detailed in the IPMP [\[REP6-053\]](#). These measures are suitably secured in conditions 13, 20, 27, 28, 29 and 30 of the draft DMLs.
- 3.10.100. It is considered by the ExA that the methods of construction, with the mitigation as set out, would reasonably minimise the potential for impact on the physical environment and that the Proposed Development has been designed considering sensitive subtidal environmental aspects, as required by NPS EN3, Paragraphs 2.8.309 and 2.8.317. Notwithstanding, the ExA considers it necessary to recommend inclusion of an additional DML condition to limit the time period for cable protection deployment (10 years post commencement of operation of the Proposed Development) in the interest of ensuring that the undertaker has sufficient regard to the future baseline seabed habitat if and when new cable protection is required. The ExA also considers it necessary to include an updated chemicals risk assessment condition to allow for more detail to be provided for chemicals that have a pathway to the marine environment.
- 3.10.101. Overall, the ExA concludes that it is satisfied with the assessment that the effects of the Proposed Development on physical processes would be minimal, and not significant, and that subject to the amendment of a limited number of conditions discussed above, adverse effects on benthic subtidal ecology are considered to be limited and only minor adverse. Given the possibility that the colonisation of artificial structures may also have some positive ecological effects, the ExA considers that there is no net level of harm to benthic subtidal ecology. The matter would therefore

be neutral in the planning balance and as such would not weigh for or against granting of the Order.

## **3.11. SHIPPING AND NAVIGATION**

### **INTRODUCTION**

- 3.11.1. This section considers the potential impacts of the Proposed Development on shipping and navigation, including on:
- navigational safety
  - adverse weather route deviations of timetabled ferry services
  - marine communications and mobile radar operations
  - emergency response capability
- 3.11.2. Interrelationships of shipping and navigation with other topics are covered in the following sections of this Report:
- Section 3.1 Overarching issues - climate change and greenhouse gases
  - Section 3.5 Aviation and radar
  - Section 3.6 Commercial fisheries
  - Section 3.12 Other offshore infrastructure and sea users
  - Section 3.13 Other Considerations (including socio-economics)
- 3.11.3. In its consideration of this topic the Examining Authority (ExA) has had regard to the overarching National Policy Statement for Energy (NPS EN-1) taken together with the NPS for Renewable Energy Infrastructure (NPS EN-3). Paragraphs 2.8.178 to 2.8.195 of NPS EN-3 are specifically pertinent to shipping and navigation. The ExA also considers that the National Policy Statement for Ports (NPSfP) is important and relevant to this application in relation to potential inter-related socio-economic impacts of the Proposed Development on shipping operations within existing ports, particularly of scheduled ferry services.
- 3.11.4. The Marine and Coastal Access Act 2009 Part 4, s69, sub-section (1)(c) provides for marine licence decisions to have regard to the need to prevent interference with legitimate uses of the sea.
- 3.11.5. The ExA has also had regard to the North West Inshore and North West Offshore Marine Plan (NWMP), specifically policies NW-PS-1, NW-PS-2 and NW-PS-3 which are of relevance to this section of the Report.

### **THE APPLICATION**

#### **Baseline environment**

- 3.11.6. The baseline environment and the methodology applied by the Applicant to characterise that environment and for carrying out Navigational Risk Assessment (NRA) are described in sections 7.5 and 7.4 respectively of ES Volume 2, Chapter 7 [\[APP-025\]](#). The study area includes waters within 10 nm of the Proposed Development plus waters to the south and east of the Isle of Man (IoM) [\[APP-025\]](#) paragraph 7.4.4.2].
- 3.11.7. Potential impacts on shipping and navigation, assessed in ES Chapter 7 [\[APP-025\]](#), are supported by Volume 4, Annex 7.1: Navigational Risk Assessment [\[APP-060\]](#).

Both these documents were resubmitted with an errata table as [\[REP6-034\]](#) and [\[REP6-041\]](#) respectively.

- 3.11.8. To inform the Cumulative Effects Assessment (CEA) for shipping and navigation, a comprehensive Cumulative Regional NRA (CRNRA) was produced in collaboration between the developers of the Morgan Generation Assets, the Mona Offshore Wind Project, the Morecambe Generation Assets project and the Morgan and Morecambe Offshore Wind Farms: Transmission Assets project [\[APP-060\]](#), Appendix E]. Provisions in s36B of the Electricity Act 1989 (as amended) regarding shipping and navigation and 'recognised sea lanes' are of relevance and are addressed in the CRNRA [\[APP-060\]](#), section 7.2].
- 3.11.9. The Non-technical Summary of the Applicant's ES also characterises the baseline shipping and navigation context for the Proposed Development as follows:
- Key commercial shipping routes bound for the Port of Liverpool pass clear of the shipping and navigation study area, but smaller shipping routes to Douglas and Heysham cross through the Morgan Array Area. Regular ferry services between the UK, Isle of Man and the Republic of Ireland operate through or adjacent to the Morgan Array Area. Fishing by static and mobile gear takes place throughout the shipping and navigation study area. Offshore recreational cruising routes between the UK and the Isle of Man were also identified, however, the numbers of vessels using them is low. Tug and service activities supporting existing offshore infrastructure is widespread (paragraph 1.10.8.3 [\[APP-008\]](#))*
- 3.11.10. There are two International Maritime Organisation (IMO) adopted navigational routing schemes within the northern Irish Sea but both these Traffic Separation Schemes (TSSs) – 'Liverpool Bay TSS' and 'Off Skerries TSS' – are situated well away from the study area and more than 20 nm away from the Proposed Development (paragraph 7.5.2.1 [\[APP-025\]](#)).
- 3.11.11. Within the study area there are three operational Offshore Wind Farms (OWFs) and four hydrocarbon fields; there are no charted anchorages, aggregate extraction or spoil or disposal grounds; and the only port control of direct relevance to the Proposed Development is the Douglas Harbour Control Limit which intersects the extreme northwest of the study area.
- 3.11.12. The baseline environment assessment notes that the predominant wind direction is from the southwest and gales are historically experienced between 12 and 30 days a year across the study area, with significant wave heights 2.9m monthly and 4.2m annually. Tidal currents are limited within the study area at less than 1.5 m/s for spring tides (paragraph 7.5.2.9 [\[APP-025\]](#)).
- 3.11.13. Cargo, fishing, passenger, tanker, tug and service vessel traffic across the study area was recorded throughout the year by Automatic Identification System (AIS) and radar survey and limited recreational vessels recorded only in the May and summer periods.
- 3.11.14. There are 10 ferry routes that pass through the study area, operated by three separate companies with an average total of 14 to 15 transits per day, of which a little more than half pass currently pass through the Proposed Development turbine array area; the principal ferry routes of relevance are those between Heysham and Douglas operated by the IoM Steam Packet Company (IOMSPC) and between Liverpool and Belfast and Heysham and Belfast operated by Stena Line.



3.11.15. Large cargo vessels over 200m in length or greater than 10m draught are reported as only occasionally transiting the study area or 'loitering' or transferring pilots off Douglas Harbour to the northwest of the Proposed Development (section 7.5.3 [\[APP-025\]](#)).

3.11.16. Commercial fishing activity reported in the NRA includes vessels up to 40m length within and near the Proposed Development (paragraph 7.5.3.11 [\[APP-025\]](#)).

### **Policy and legislation**

3.11.17. Tables 7.1, 7.2 and 7.3 describe how and where policy requirements have been considered by the Applicant [\[APP-025\]](#).

3.11.18. ES Chapter 7 discusses how the ES addresses United Nations Convention on the Law of the Sea 1982 (UNCLOS) Article 60 which concerns artificial islands, installations and structures within the exclusive economic zone (EEZ) of individual states. The ES confirms that the Proposed Development would not be located "*within or in proximity to*" an IMO designated route.

3.11.19. The Applicant's NRA explains that the Proposed Development does not interfere with recognised sea lanes essential to international navigation as defined in UNCLOS 1982 and confirms that no such recognised sea lanes are indicated on charts in the study area of the Proposed Development, and following the conclusion reached in past OWF examinations, the shipping routes close to the Proposed Development should be considered to be strategically important routes for lifeline ferry services in relation to NPS EN-3 paragraphs 3.2.328 and 3.2.329. Furthermore, given that alternative routes exist around the Proposed Development, albeit necessitating increased passage distance (see section 1.8.3 and 1.8.4), "*they do not provide unique access and so cannot be regarded as 'essential'*" (Table 7.2 and section 7.9.2 [\[APP-025\]](#) and section 1.8.2 [\[APP-060\]](#)).

3.11.20. The ES recognises that vessels operating in and around the Proposed Development are also subject to the IMO convention on Marine Pollution (MARPOL 1973 and protocols 1978 & 1997, as amended) (paragraph 1.2.1.2 [\[APP-060\]](#)).

### **Engagement with stakeholders**

3.11.21. Site selection and evolution of the proposed order limits in relation to existing navigation and shipping routes is addressed in ES Volume 1, Chapter 4: Site Selection and Consideration of Alternatives [\[APP-011\]](#). Consultation with stakeholders including potentially affected regular operators of shipping services in the study area is summarised in the Applicant's Consultation Report [\[APP-104\]](#). Key feedback from shipping and navigation stakeholders is reported in (Table 4.3 and section 4.2 [\[APP-011\]](#)).

3.11.22. A (non-statutory) Marine Navigation Engagement Forum (MNEF) was set up by the Applicant in 2021 in the pre-application phase to update and engage stakeholders on plans and progress of the Proposed Development and to seek resolution to concerns raised about individual or cumulative impacts together with other projects including the Mona Offshore Wind Farm project and the Morecambe Offshore Windfarm Generation Assets project. In the NRA [\[APP-060\]](#) post-construction continuation of this MNEF is committed to as an additional risk control, together with adoption of realigned array boundaries, dual lines of orientation for wind turbine generator (WTG) layout, and coordination of construction phasing and vessel movement through Vessel Traffic Management Plans to be secured in the DCO.

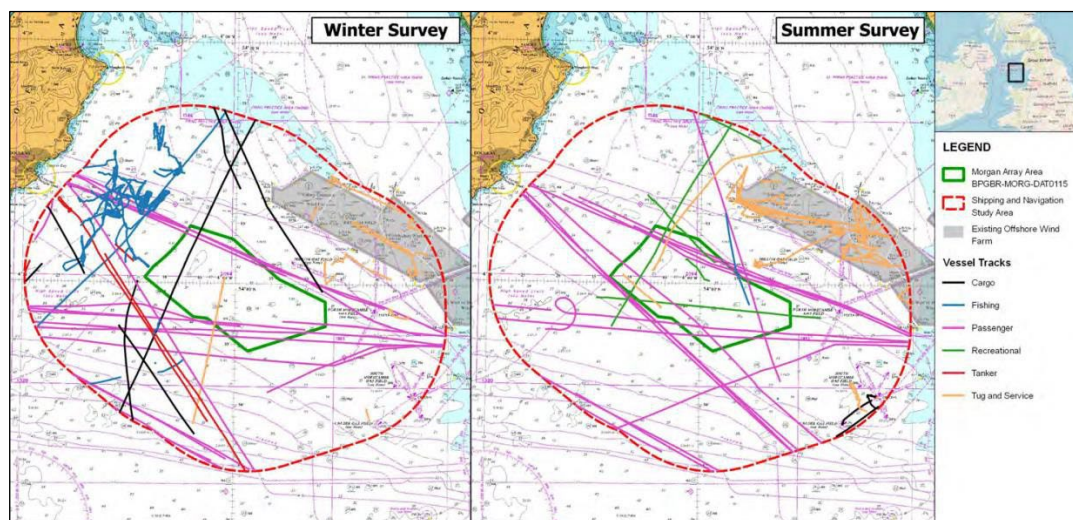
### Site selection and boundary modifications

- 3.11.23. Following pre-application consultation, the Proposed Development boundary was modified to increase navigable width of the 'corridor' between proposed structures and the existing Walney and Walney Extension OWFs to the east of the site from "between 2.7/4.1 nm to between 4.3/5.3 nm", agreed in consultation with the regulatory authorities, the UK Chamber of Shipping (UKCoS) and operational shipping stakeholders (Table 46 [APP-025]).

### Deviation of shipping routes

- 3.11.24. The Applicant assesses that, in typical weather conditions, main shipping routes in the study area, including scheduled passenger ferry routes, would need to deviate around the proposed array area. The maximum extent of deviation for the IOMSPC Heysham-Douglas service would be 0.5 nm representing an additional transit time of about 1.6 minutes, and for the Stena Line Liverpool to Belfast service it would be up to about 2.5 nm representing an increase of transit time of about 8 minutes (section 7.9.3 and Tables 7.18 and 7.19 [APP-025]).
- 3.11.25. Figure 26 below shows the assessment of busiest day marine traffic in the immediate vicinity of the Proposed Development in winter 2021 and summer 2022.

**Figure 26: Busiest day vessel traffic surveys, winter 2021 and summer 2022<sup>35</sup>**



- 3.11.26. The ES concludes that for all phases of the Proposed Development alone, the effects of all impacts to commercial operators including strategic routes and lifeline ferries (other than adverse weather routing effects noted below) would be minor adverse after mitigation, therefore not significant in EIA terms [APP-025].

### Additional adverse weather route deviation

- 3.11.27. The Non-technical Summary [APP-095] establishes the baseline:

*Adverse weather, particularly from the prevailing southwest, was demonstrated to have an influence of vessel traffic patterns. Historical incident data demonstrated that relatively few navigational incidents had occurred within the shipping and*

<sup>35</sup> Source: ES Volume 4, Annex 7.1, Navigation Risk Assessment, Figure 1.12 [APP-060]

*navigation study area, with the majority analysed occurring in the approaches to Liverpool (paragraph 1.10.8.).*

- 3.11.28. Section 7.9.4 of ES Chapter 7 [\[APP-025\]](#) states that as an effect of the Proposed Development alone, deviated transit for adverse weather passage of the IOMSPC service between Heysham and Douglas was assessed to be 5.7 nm of steaming distance hence a further 21.5 minutes of passage time, additional to pre-existing adverse weather passage time extension of between 10 and 23 minutes.
- 3.11.29. The ES recognises that this cumulative passage time extension per crossing of at least 31.5 minutes (and up to 44.5 minutes) could result in service cancellations and potential problems with crew manning.
- 3.11.30. Stena Line's Heysham to Belfast service was assessed to need additional route deviation to the south and west of the Proposed Development in adverse weather, estimated to add a further 61 minutes of transit time on top of an existing adverse weather delay of 101 to 131 minutes.
- 3.11.31. For adverse weather routing for the IOMSPC scheduled lifeline ferry services between Heysham and Douglas, and for Stena Line scheduled ferry services between Belfast and Heysham, the significance of those effects consequent on impacts of the Proposed Development alone is assessed as moderate adverse (Table 7.24 [\[APP-025\]](#)).
- 3.11.32. The effects also need to be considered in relation to cumulative effects with other projects, as noted below.

#### **Impact on access to UK ports and harbours**

- 3.11.33. Potential impact on access to UK ports and harbours is considered in section 7.9.5 of ES Chapter 7 and the Applicant concludes a negligible adverse effect in all phases of the Proposed Development, hence not significant in EIA terms.

#### **Impact on emergency response capability**

- 3.11.34. Potential impact on emergency response capability due to increased incident rates and reduced access for search and rescue responders is assessed in section 7.9.6 of ES Chapter 7 and likely effects after mitigation are judged minor adverse, hence not significant in EIA terms.

#### **Impact on navigational risk**

- 3.11.35. In assessing risk, the NRA and CRNRA assume that vessel masters will comply with international obligations within the IMO Safety of Life At Sea (SOLAS) Convention Chapter V (Safety of Navigation) 1974 (as amended), the Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREGs), IMO Standards of Training, Certification and Watchkeeping for Seafarers (STCW 1978, as amended), and national regulations and guidance under the UK Merchant Shipping Act 1995 (paragraphs 1.5.4.4, 1.9.2.3 and its Appendix E paragraphs 2.1.1.1.2, 4.4.3.1.1 and 8.2.1.1.3 [\[APP-060\]](#)).
- 3.11.36. The Proposed Development may induce increased vessel-to-vessel collision risk, assessed as 'minor adverse' significance in all phases of development (section 7.9.7 [\[APP-025\]](#)). Collision hazards were assessed as 'Medium Risk –Tolerable if As Low As Reasonably Practicable (ALARP) for collision between:

- a ferry/ passenger vessel or cargo vessel/ tanker and a small craft (such as fishing, recreational or project vessel)
- a ferry/ passenger and a cargo/ tanker or other ferry/ passenger vessel
- two small craft

3.11.37. The NRA concludes (section 7.9.7 [APP-025]) that where hazards were scored as Medium Risk, with a low magnitude of effect due to a “*relatively low*” assessed likelihood of collision based on results of modelling and navigation simulations, and assessed high receptor sensitivity they could be defined as Tolerable and ALARP subject to suitable risk controls embedded or secured by the draft DCO development].

3.11.38. The same assessment of minor adverse significance in all phases is made for allision (contact) risk between navigating vessels and structures development.

#### **Impact on marine communications, radar and positioning systems**

3.11.39. The Applicant’s NRA assesses no likely significant adverse impact of the Proposed Development to very high frequency (VHF) marine radio communications, AIS reception, GPS satellite communications or compass accuracy (section 7.9.9 [APP-025] and section 1.8.12 [APP-060]). However, adverse effects on mobile marine radar may be experienced within 1.5nm of offshore wind turbine arrays as identified in primary industry research and some shipping may pass within that distance. However, the Applicant argues that regular users of the routes across the eastern Irish Sea transiting past existing offshore wind farms should be familiar with these effects (paragraph 1.8.12.5 [APP-060]).

#### **Impact on recreational navigation**

3.11.40. No likely significant impact from the Proposed Development on recreational navigation over the lifetime of the Proposed Development is foreseen by the Applicant (section 7.9.10 [APP-025]).

#### **Cumulative Effects Assessment**

3.11.41. The CRNRA was designed to dovetail with the individual NRAs of each project and primarily focuses on the impacts of the presence of the Morgan, Mona and Morecambe proposed OWF array areas in relation to existing offshore wind farms on vessel navigation and safety in operations and maintenance phase, principally concerning regular shipping routes passing between and around the array areas. It includes bridge navigational simulations conducted with Stena Line, Seatruck (now DFDS) and the IOMSPC, reported in detail in Appendix E within Appendix E [APP-060].

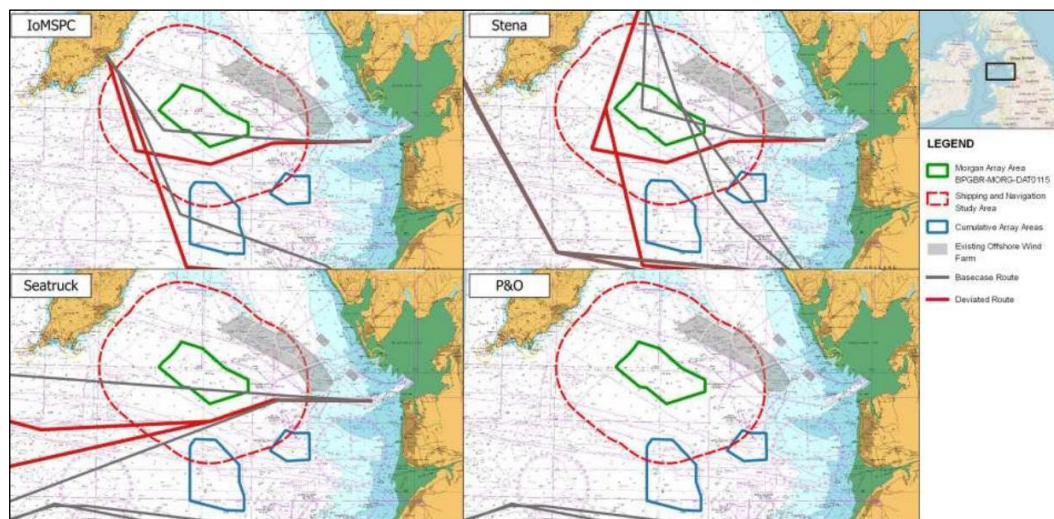
3.11.42. That CRNRA concludes in paragraph 7.14.1.1 of [APP-025] that during all phases of development, there would be the following significant cumulative residual effects for shipping and navigation receptors:

- Route deviation of commercial vessel transits past the Proposed Development, including lifeline ferry services to the IoM
- Additional deviation of adverse weather ferry routeing past the Proposed Development in addition to the Mona and Morecambe OWF projects
- Increased vessel to vessel collision risk in ‘corridors’ between proposed OWFs
- Increased allision (contact) risk for vessels passing OWF structures



- 3.11.43. Figure 27 below illustrates the assessed deviations to ferry routes that would be necessitated in adverse 'metocean' (primarily wind, wave and tidal) conditions by the presence of cumulative projects, excluding Moir Vannin.

**Figure 27: Deviations to adverse-weather ferry routes with cumulative projects (excluding Moir Vannin OWF)<sup>36</sup>**



- 3.11.44. Including as a result of changes to adverse weather routing, collision and allision risks for vessels during all phases cumulatively with other projects with the exception of the proposed Moir Vannin OWF project are concluded in the CRNRA to be at worst “*Medium Risk- Tolerable if ALARP*” subject to risk controls and after mitigation including boundary changes made to the Proposed Development (paragraph A3.1.1.22 and A4.1.1.17 [APP-025]).
- 3.11.45. The CEA Appendix summarises that for ships’ masters for both the IOMSPC and Stena Line the presence of the cumulative projects could increase the number of occasions during which adverse weather routes are taken (paragraphs A2.1.1.12 and A2.2.1.17 [APP-025]).
- 3.11.46. For impact of the Proposed Development on adverse weather routing for IOMSPC and Stena Line ferry services, the Applicant assessed that cumulative effects after mitigation (disregarding the potential Moir Vannin OWF project) would be moderate adverse in all phases and therefore significant in EIA terms (Tables A.3, A.4, A.5 and A.6 and Tables A.7, A.8 and A.9 respectively [APP-025]).

#### **Cumulative effects of adverse weather route deviation for commercial shipping operators – addendum CRNRA including Moir Vannin OWF project**

- 3.11.47. An addendum CRNRA (Appendix D to the CRNRA) was subsequently produced by the Applicant based on a limited amount of information about the proposed Moir Vannin OWF when that project was elevated to Tier 2 after its EIA scoping report was published in October 2023 (Appendix D within Appendix E [APP-060]).
- 3.11.48. In summary, residual navigational risks of collision and allision after mitigation were assessed in the addendum as “*High Risk and Unacceptable*” due to limited sea

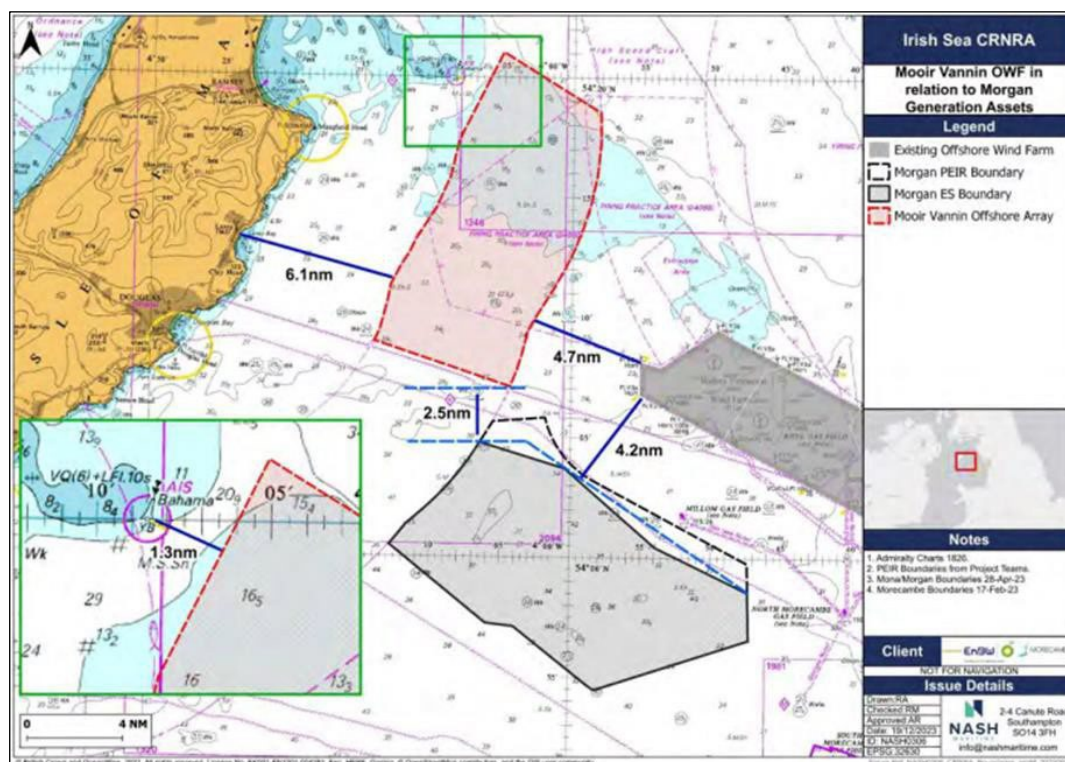
<sup>36</sup> Source: ES Volume 2, Chapter 7, Figure A.3 [APP-025]



room between the Moir Vannin project and the Proposed Development (paragraphs A3.1.1.23 and A4.1.1.18 [APP-025]).

- 3.11.49. At the time of submitting the Application including the CRNRA, the navigational route width or 'pinch-point' within the proposed cluster of OWFs was 2.5 nm between the Proposed Development array area and the 'scoping boundary' of the Moir Vannin OWF (its structures boundary as understood at that time) which the Applicant assessed as *"insufficient for safe navigation in adverse weather"* [APP-025]. Figure 28 below illustrates that 'pinch-point' or gap.

**Figure 28: Moir Vannin OWF preliminary boundary in relation to the Proposed Development and to the existing Walney Extension OWF<sup>37</sup>**



- 3.11.50. Paragraph A.4.1.1.11 of the CEA ES Chapter 7 [APP-025] therefore summarises that:

*...with the addition of the Scoping Boundary of Moor Vannin Offshore Wind Farm, a 2.5 nm wide route is formed with the Morgan Generation Assets Array Area. The 2.5 nm width is insufficient to maintain adequate closest point of approach from other vessels which might be encountered, and this was confirmed during the navigation simulations and hazard workshop undertaken to inform the Environmental Statement. Therefore, an unacceptably high allision risk would result, considering likely meeting situations and susceptibility to adverse weather on this route.*

- 3.11.51. The Applicant took the position that this elevated potential cumulative navigational safety impact must be addressed in due course by the Moir Vannin project through its own planning consent process for that project.

<sup>37</sup> Source: ES Volume 4, Annex 7.1, Navigation Risk Assessment, Appendix E, Figure 61 [APP-060]

- 3.11.52. A subsequent modification of the Moir Vannin OWF structures boundary is discussed further in the examination of issues below.

### **Mitigation**

- 3.11.53. Tables 7.40 and 7.41 of ES Chapter 7 [APP-025] and the Mitigation and Monitoring Schedule [APP-076] superseded by the Commitments Register [REP6-051] describe the mitigation and monitoring commitments secured in the draft DCO to address adverse effects arising from impacts of the Proposed Development on shipping and navigation receptors, including development of and adherence to:

- A Design Plan to be agreed with the MMO in consultation with the Maritime and Coastguard Agency (MCA) and Trinity House, including minimum infrastructure spacing of 1,400m secured within the draft deemed marine licences (DMLs) of the draft DCO
- An Aids to Navigation Management Plan secured within the draft DMLs
- Marking and charting of the array to facilitate safe vessel passage planning, secured within the draft DMLs
- Use of Notices to Mariners detailing advisory clearance distances (around cable installation vessels) and safety zones (to be applied for under the Energy Act 2004) around infrastructure during construction and periods of major maintenance, secured as a condition in the draft DMLs
- A Vessel Traffic Management Plan (VTMP) including continuous VHF radio watch during construction and operations and maintenance, secured by the draft DMLs
- An Offshore Environmental Plan (EMP), which includes a Marine Pollution Contingency Plan secured within the draft DMLs
- An Offshore Construction Method Statement (CMS) post-consent with a Cable Specification and Installation Plan (CSIP) including details of cable protection and cable burial monitoring and re-burial procedures, secured by condition in the draft DMLs
- Hydrographic surveys including as-laid coordinates of cable routes submitted to the UK Hydrographic Office (UKHO), as required for compliance with the MCA's Marine Guidance Note 654 (MGN 654) and its annexes, secured within the draft DMLs
- An Emergency Response and Cooperation Plan (ERCoP), secured within the draft DMLs
- A Navigation Monitoring Strategy including continuous AIS monitoring during construction and operations and maintenance, secured within the draft DMLs
- Continued engagement with stakeholders through the MNEF, secured in the draft DCO through the Mitigation and Monitoring Schedule
- Incident investigation and reporting, statutorily required under the Merchant Shipping Act 1995 and the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013

### **Inter-related effects and effects to other sea users**

- 3.11.54. A description of the likely inter-related effects arising from impacts of the Proposed Development on shipping and navigation is provided in ES Volume 2, Chapter 15: Inter-related effects [APP-019]. In particular, the Applicant assesses that:

*... displacement from fishing grounds of commercial fishing vessels... will increase the vessel to vessel collision risk ... However, it is unlikely that effects will act together and that any interactions between effects will be of any greater significance than those already assessed for the Morgan Generation Assets individually (Table 15.12 page 3 [APP-019]).*

- 3.11.55. Other interactions between shipping and navigation and other impacts (such as to commercial fisheries and to other sea users) were also considered in the NRA, and the interaction of effects was found not to be of greater significance than separately assessed [\[APP-060\]](#).
- 3.11.56. Section 1.7.4 of ES Volume 4, Annex 12.1: Technical greenhouse gas (GHG) assessment [\[APP-046\]](#) assesses the indirect GHG emissions that would be an effect of increased ferry and cargo route deviations resulting from the impact of the Proposed Development.
- 3.11.57. Table 13.89 of ES Volume 2, Chapter 13: Socio-economics [\[APP-017\]](#) concluded that potential adverse socio-economic residual effects on the IoM inter-related with potential adverse effects on lifeline ferry services cumulatively with other Tier 1 and Tier 2 projects would be at worst minor adverse, therefore not significant in EIA terms. The word 'medium' was included in error in the conclusions of Table 13.89 and was corrected in the 'errata' table of [\[REP6-037\]](#) to 'minor (adverse significance)'.
- 3.11.58. ES Chapter 15 [\[APP-019\]](#) concludes that there would be potential minor adverse socio-economic effects on the IoM inter-related with adverse effects to lifeline ferry services; but did not anticipate that these would interact so as to produce a combined effect greater than the separate assessments (Table 15.17 page 51, Table 15.18 page 54 and para 15.6.3.24).

#### **Transboundary effects**

- 3.11.59. The Applicant's ES Chapter 7 reports that no transboundary shipping and navigation effects are anticipated [\[APP-025\]](#).

### **ISSUES CONSIDERED DURING THE EXAMINATION**

#### **Transboundary considerations**

- 3.11.60. In [\[PD1-017\]](#) the Applicant confirmed that in its EIA it had treated the IoM (a UK Crown Dependency and not part of the EU) as if it were a statutory authority in England, and has assessed potential environmental effects on the IoM in the same way as for effects within the UK.
- 3.11.61. The Applicant confirmed that the Irish Chamber of Shipping had been invited to join the MNEF but chose to only attend its first meeting, in November 2021, and noted that as there is significant distance to the EEZ of the Republic of Ireland with "no credible impact pathway", the Applicant does not believe that specific consultation with the Irish Marine Safety Office is necessary (point 21 [\[REP1-005\]](#)).
- 3.11.62. The ExA considers that adequate assessment and engagement has been undertaken by the Applicant and that there would be no significant transboundary effects on shipping and navigation.

#### **Local Impact Report from the Isle of Man Government**

- 3.11.63. The IoM government was invited by the ExA to submit a Local Impact Report (LIR) as if it were a UK authority. The IoM government, through its Harbours Division, assumes responsibility for search & rescue, pollution, salvage, and safe navigation within the IoM territorial sea. The LIR submitted by the IoM government through its Territorial Sea Committee (TSC) represents only IoM government interests and not any views of non-governmental stakeholders. The IoM TSC considered that

shipping and navigation impacts and potential effects had been adequately identified by the Applicant [\[REP1-047\]](#).

3.11.64. The LIR confirmed the IoM TSC's ongoing concerns about potential socio-economic effects (contingent on additional scheduled lifeline ferry service cancellations occasioned by adverse weather routing changes) as a consequence of shipping and navigation impact of the Proposed Development alone and cumulatively with other developments in the Irish Sea.

3.11.65. The examination of shipping and navigational issues (as discussed in the rest of Section 3.11 of this Report) focused on the following sub-topics:

- Potential impact on navigational safety risks
- Impacts on marine communications and mobile radar operations
- Emergency response and co-operation and continued stakeholder engagement on marine navigational safety
- Consequential effects of adverse weather deviations of timetabled ferry services including effects to ports and local communities

#### **Potential impact on navigational safety risks**

##### ***Representations by Interested Parties***

3.11.66. Stena Line recorded in its Relevant Representation (RR) [\[RR-039\]](#) that it had engaged with the Applicant pre-application and had noted increased navigational safety risks due to several proposed OWFs affecting the routes of its strategic ferry services, notably the Belfast-Liverpool service with two passenger ferries.

3.11.67. Moir Vannin OWF Limited noted that, in relation to cumulative maritime safety effects and impacts to commercial operators in combination with the Moir Vannin OWF project, it does not consider it appropriate to defer all mitigation for cumulative impacts to the finalisation of the consent application for the Moir Vannin OWF [\[RR-021\]](#).

3.11.68. In [\[PD1-017\]](#) (pages 85 to 86) the Applicant responded with its expectation that the CEA that has to be prepared by Moir Vannin OWF Limited will be undertaken in line with the MCA's MGN 654 guidance in order to establish safe sea room between the two proposed developments.

3.11.69. The Written Representation (WR) from West Coast Sea Products (WCSP) contended that there would be increased collision risk due to 'spatial squeeze' during peak scallop fishing season and that potential cable exposure would create an increased hazard of fishing gear snagging [\[REP1-065\]](#). The Applicant subsequently explained how fishing activity had been taken into account in its NRA [\[REP2-005\]](#).

3.11.70. At ISH1 the Scottish Fishermen's Federation (SFF) claimed that fishing activity had not been adequately accounted for in the surveys carried out to assess baseline marine traffic. The Applicant responded that twice the amount of survey activity required by MGN 654 guidance had been carried out for the EIA and fishing activity was indeed assessed, including scallop fishing by SFF members [\[REP4-006\]](#).

##### ***MCA guidance and Isle of Man Territorial Sea Committee oversight***

3.11.71. The RR from the Maritime and Coastguard Agency (MCA) [\[REP1-051\]](#) explains that it is an executive agency of the Department for Transport (DfT) responsible for developing the UK government's maritime safety and environmental protection



policy and this includes provision of a maritime and coastal search and rescue emergency coordination and response service and provision of guidance and certification to vessels and mariners as well as enforcement of standards for ship safety and coastal pollution prevention.

- 3.11.72. Whilst not mandatory, MCA marine guidance note 'MGN 654 (M+F) Safety of Navigation: Offshore Renewable Energy Installations (OREIs) - Guidance on UK Navigational Practice, Safety and Emergency Response', is relevant and important to the decision-making process for the Proposed Development. MGN 654 requires OREI developers to demonstrate that sufficient mitigation commitments would be in place for assessed residual navigational safety risks to be ALARP and tolerable.
- 3.11.73. In [\[REP1-051\]](#) the MCA confirmed its satisfaction that the Applicant's NRA for the Proposed Development alone had followed MCA guidance and that the adopted additional risk controls (set down in Table 1.42 of [APP-060](#)) would be appropriate for reducing navigational safety risks to ALARP.
- 3.11.74. With regard to cumulative navigational risk together with the Mooir Vannin OWF proposal, the MCA confirmed its expectation for the two developers to reach agreement on increasing the sea space between the two sites *"to ensure the navigation risks are tolerable"* [\[REP1-051\]](#).
- 3.11.75. In response to ExQ1 SN 1.1, SN 1.2 and SN 1.3 [\[PD-004\]](#) the MCA confirmed that it is not the navigation authority for IoM territorial waters, the responsibility of which falls to the relevant department in the IoM government. The MCA also confirmed that the navigation routes passing east, west and south of the Proposed Development and between the Proposed Development and the proposed Mooir Vannin OWF are considered to be strategic routes essential to regional, national and international trade but none of them constitute a sea lane essential to navigation and there are no plans to propose the introduction of a new traffic separation scheme in the Irish Sea [\[REP3-038\]](#).
- 3.11.76. It was clarified at ISH2 by the IoM TSC that its Harbours Division is the competent authority for navigational safety oversight in the whole of the IoM territorial sea, interfacing with the MCA whose similar authority extends up to the limit of the UK EEZ.
- 3.11.77. The Mooir Vannin developer confirmed in its response to ExQ1 SN1.8 its commitment to carry out an NRA compliant with the MCA's MGN 654 [\[REP3-039\]](#).

***Risk assessment of passage between offshore wind farms***

- 3.11.78. In response to questioning at ISH2 about the risk assessment of the gap between the Proposed Development and Mooir Vannin OWF, the Applicant restated its case that it had already made reductions to its array area to reduce encroachment on sea space for shipping thereby increasing the distance from the Mooir Vannin OWF Agreement for Lease (AfL) boundary by approximately 1.2 nm [\[EV4-002\]](#).
- 3.11.79. At ISH2 the Applicant confirmed that the primary adverse metocean conditions considered in passage planning by commercial shipping and particularly ferries are wave height, direction and period, normally related to wind pressure from the southwest. The consequent motion of vessels can be uncomfortable and potentially unsafe for ferry passengers and could create dangerous movement of cargo or freight vehicles on board. In such cases, ship masters crossing the eastern and north Irish Sea will modify their passage plan to spend as little time beam-on to the



waves, by taking shelter east of the IoM as much as is optimal in the conditions expected [\[EV4-002\]](#).

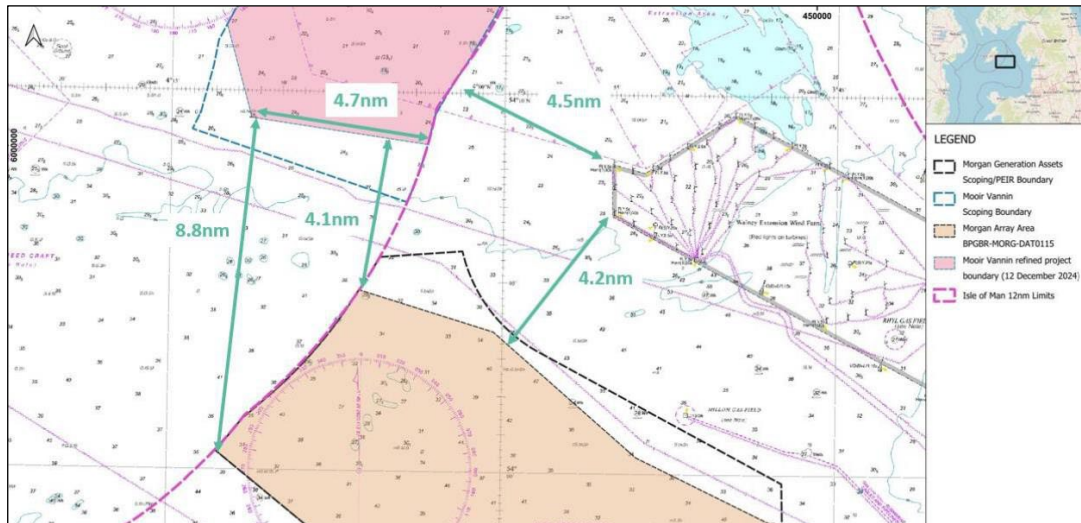
- 3.11.80. Also at ISH2 the ExA made the point to the Applicant and the IoM TSC that it was conceivable (although unlikely) that a decision on marine infrastructure consent for the Mooir Vannin OWF could be made before a decision on the Proposed Development, in which case the SoS would not be in a position to impose marine licence conditions or requirements on the Morgan DCO to reduce navigation risk by spatial constraints in the sea space between developments within IoM waters; for that reason the ExA suggested that it was in the best interests of both the Applicant and Mooir Vannin OWF Limited to agree a suitable separation distance between the structures of the two projects [\[EV4-002\]](#).
- 3.11.81. Further at ISH2, the ExA asked the IoM Harbours Division to confirm factual information regarding charted marine navigational hazards for passage to the east and north of the IoM. As Mooir Vannin OWF Limited was not present at ISH2, the Applicant expressed concern about the line of questioning. In order to ensure that Mooir Vannin OWF Limited was not unfairly disadvantaged by not being able to respond during the hearing, subsequent Action Points were directed to Mooir Vannin OWF Limited including an invitation to review the recording and to submit any comments or additional responses to questions [\[EV4-002\]](#).
- 3.11.82. In its submission at D5 the UKCoS referenced and hyperlinked a navigational report issued by the Dutch Safety Board in June 2024 titled 'Compromise on room to manoeuvre. Managing the safety of shipping in an increasingly crowded North Sea' [\[REP5-092\]](#). At ISH3, the Applicant noted that that report was for a context very different to that of the Proposed Development, being concerned primarily with ultra-large container carrier shipping in very constrained Dutch waters [\[REP6-012\]](#) and therefore was not of direct relevance to this Examination.
- 3.11.83. Following ISH2 the Applicant clarified some points in the NRA regarding the assessed transits of deep-draught vessels in the vicinity of the Proposed Development and the gap between the Proposed Development and the proposed Mooir Vannin AfL boundary, also providing additional commentary on precedent for restricted gaps between OWF arrays and how they compare with the Morgan-Moor Vannin context (Table 1.1 [\[REP4-005\]](#)).

***Revised risk assessment of the increased gap between proposed OWFs***

- 3.11.84. The Applicant submitted at D5 a note explaining that Mooir Vannin OWF Limited had reduced its proposed structures boundary to leave an increased gap of 4.1nm from the Morgan Proposed Development, and had held a navigation risk workshop observed by the (Morgan) Applicant, noting that the distance of 4.1nm satisfies the relevant guidance with "highly conservative" assumptions on vessel size and numbers [\[REP5-004\]](#).
- 3.11.85. Mooir Vannin OWF Limited also confirmed at D5 that it had now assessed cumulative residual navigational risk for passage between the proposed wind farms as ALARP and tolerable [\[REP5-075\]](#).
- 3.11.86. The MCA confirmed that it was therefore satisfied that this revised separation distance between the Proposed Development and the proposed Mooir Vannin OWF complies with MGN 654 guidance even though that the gap is not being considered as a 'corridor', as described in MGN 654 paragraph 4.7.g [\[REP5-069\]](#).

- 3.11.87. At ISH3 the IoMSPC contended that the separation between the proposed Mooir Vannin OWF and Morgan boundaries should be a minimum of 5nm due to the presence in the adjacent sea space of multiple vessel interaction from multiple directions including occasional large passing shipping, trawling activity [EV6-003].
- 3.11.88. The Applicant confirmed that the location of the Proposed Development adjacent to the IoM territorial sea limits does not present a “*jurisdictional conflict*” which could adversely affect navigational safety because international conventions and regulations for maritime safety apply equally to both UK and IoM, principally UNCLOS, SOLAS and COLREGS (paragraph 7.3.2.2 [REP6-014]).
- 3.11.89. In a post-meeting note [REP6-110], the IOMSPC sought to justify a wider separation distance because of multiple types of vessels (including high speed craft) transiting this sea space in several directions and requested the ExA to consider imposing measures to widen the Morgan /Mooir Vannin gap further, referencing how the COLREGS impose obligations for avoidance action by the ‘give way’ vessel that may involve “*a large change in heading or significant speed change*” the effectiveness of which will be determined by the characteristics of the vessel and that substantial sea room needs to be available.
- 3.11.90. However, the Applicant submitted at ISH3 that an increase from 4.1 nm to 5 nm would not be significant in further reducing risk and in any case the space between Mooir Vannin OWF and the Proposed Development is a ‘gap’ rather than a ‘channel’ flanked by structures and would therefore be much less restrictive of avoidance manoeuvre in emergency (Agenda item 3(a)(19) [REP6-012]).
- 3.11.91. Stena asserted in response to ExQ2 SN2.3 that their own assessment of the guidance on route corridor width between OWFs indicated that the guidance would not be met in the space between the Proposed Development and Mooir Vannin OWF, submitting an analytical diagram [REP5-088]. The Applicant rebutted that at ISH3 as confirmed in agenda item 3(a)(11) in [REP6-012] and paragraphs 20.1.1.1 and 20.1.1.2 of [REP6-004].
- 3.11.92. Subsequent to the December 2024 change of proposed array area by Mooir Vannin OWF Limited, the Applicant submitted an extensive technical clarification note [REP6-065] as a supplement to the CRNRA assessing the effects of the Proposed Development in combination with other proposed infrastructure by means of a navigational safety risk review with supplementary bridge simulations that it carried out with representatives from stakeholders.
- 3.11.93. Figure 29 below, taken from [REP6-065] illustrates the increased gap between OWFs as proposed by the close of the examination.

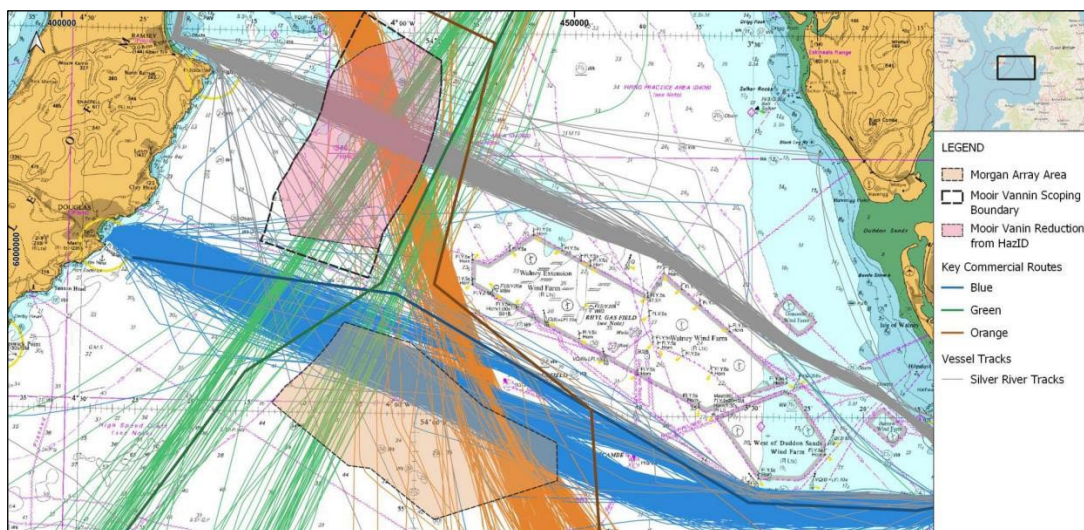
**Figure 29: The ‘gap’ between the Proposed Development and the proposed Moir Vannin and existing Walney Extension OWFs<sup>38</sup>**



3.11.94. In support of its updated hazard assessment the Applicant also presented a detailed analysis of collision hazard (with commercial vessels, fishing craft or other small craft) related to traffic density and frequency in this sea space and an analysis of the hazard of allision of disabled vessels with OWF structures (section 3 [REP6-065]).

3.11.95. Figure 30 below also taken from [REP6-065] shows an analysis of commercial vessel traffic transiting this sea space, using AIS track data from 2022. The Applicant reports an average daily transit of 9 vessels on the blue route (Douglas-Heysham), 2 vessels on the green route (Anglesey-Solway Firth) and 6 vessels on the orange route (Liverpool-Belfast).

**Figure 30: Commercial vessel transits through the sea space between the Proposed Development and the proposed Moir Vannin and existing Walney Extension OWFs<sup>39</sup>**



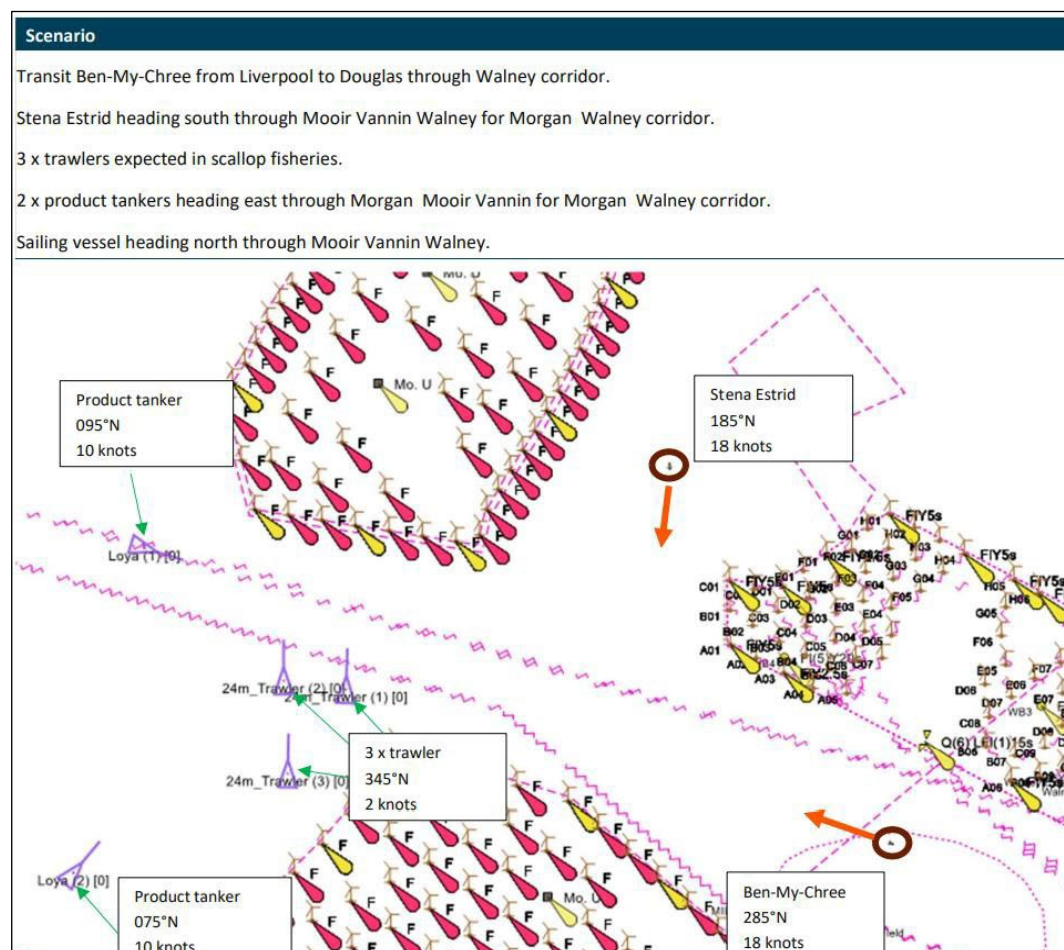
<sup>38</sup> Source: 'MVOWF gap' navigational safety technical clarification note, Figure 2.1 [REP6-065]

<sup>39</sup> Source: 'MVOWF gap' navigational safety technical clarification note, Figure 3.1 [REP6-065]



- 3.11.96. The technical note provided detail of additional bridge navigation simulations carried out (involving masters of the IOMSPC and Stena Line in realistic worst-case traffic and weather conditions and observed by the MCA). It noted some limitations to the simulation sessions and concluded that in adverse weather conditions *“it would be prudent to navigate south of the Morgan Array Area”* depending on vessel characteristics (paragraph 2.5.2.7 [REP6-065]).
- 3.11.97. The most severe conditions simulated for the passage between the Moir Vannin OWF and the Proposed Development were in Run 03 for both Stena and IOMSPC ferries with south west wind 25 to 30 knots, waves 2.5m height, 6 second periodicity; and Runs 8 and 9 for a Stena ferry passing west and south of the Proposed Development in adverse conditions of 50 knots south west wind and 4.2m swell (Table 2.1 [REP6-065]).
- 3.11.98. As an example of scoping of the additional simulations, Figure 31 below shows the context modelled in Run 03; in this scenario it was found necessary for the IOMSPC to reduce speed, resulting in greater rolling motion and potential discomfort for passengers (paragraph 3.31.12 and Appendix A page 43 [REP6-065]).

**Figure 31: Context for additional bridge simulation Run 03<sup>40</sup>**



<sup>40</sup> Source: 'MVOWF gap' navigational safety technical clarification note, Appendix E, page 26 [REP6-065]

- 3.11.99. The additional assessment reported in that technical note also confirmed agreement with stakeholders that the presence of the Mooir Vannin OWF would constrain the ability of vessels to route past the north-eastern extremity of the IoM in particularly adverse metocean conditions, but that constraint would be independent of the presence of the Proposed Development (Appendix E Simulation report by HR Wallingford [\[REP6-065\]](#)).
- 3.11.100. The Applicant reported in paragraph 3.4.1.6 [\[REP6-065\]](#) that master mariners from both Stena and IOMSPC conducted simultaneous bridge simulations of challenging situations with fishing vessels and commercial tanker vessels crossing ferry routes. In particular, worst-case conditions for frequency and course of multiple vessels were simulated for passage of the IOMSPC ferry in Runs 03, 05 and 06.
- 3.11.101. The Applicant's technical clarification note also confirms in paragraph 2.5.2.8 that all parties present at these new simulation sessions agreed that there may be a need to reduce speed while transiting this sea space to manage collision risk and there may be an effect on crewing arrangements including working time constraints and composition of the bridge team.
- 3.11.102. The Applicant reported in paragraph 2.5.3.4 that the additional risk assessment workshop failed to result in complete agreement with IOMSPC and Stena on the acceptability or tolerability of risk in the sea space adjacent to both the Proposed Development and the Mooir Vannin OWF array.
- 3.11.103. However, the Applicant argued that the disagreement is inconsistent with the previous agreement of the same stakeholders to the tolerability of risk in the corridor between the Proposed Development and the Walney OWFs, with a separation distance of between 4.2nm and 5.3nm over a substantially longer length which the Applicant argues in paragraphs 1.1.1.7 to 1.1.1.11 of [\[REP6-065\]](#) as therefore inherently riskier.
- 3.11.104. The Applicant also pointed out in paragraphs 4.3.2.3 and 4.3.2.4 that the objecting stakeholders have not provided any evidence that an increased gap of 5nm would provide increased mitigation of risks other than slightly greater sea room.
- 3.11.105. Pages 64 and 65 of the technical clarification note also contains an updated review of precedent for restricted gaps or channels between existing and consented offshore windfarms, of which that between Hornsea One and Hornsea Three at 3.9nm by 8.4nm provides probably the most relevant comparative context, noting however that the 2.2nm 'bowtie' shaped pinch-point between Hornsea Four and Hornsea Two is also particularly relevant because of the available sea space either side of that pinch-point, as are the gaps of minimum of 2.2nm width between the Ormonde, Barrow, Walney and West of Duddon Sands arrays in the north Irish Sea that are used safely as regular fair weather transit for ferries.
- 3.11.106. The Applicant concluded the risks of navigation in the sea space between the Proposed Development and Mooir Vannin to be tolerable and ALARP after mitigation controls including the increase of separation of structure arrays to minimum 4.1nm at the narrowest location, therefore not significant in EIA terms [\[REP6-065\]](#).

***Interested Party positions at close of the Examination***

- 3.11.107. The IOMSPC's post-ISH2 note provided summaries of two incidents of vessels drifting with reduced power, stating that cases of vessels losing propulsion at sea is



not common it is entirely possible and must be given due consideration in relation to vessels transiting the Moir Vannin/ Morgan bottleneck 'gap' area [\[REP6-110\]](#).

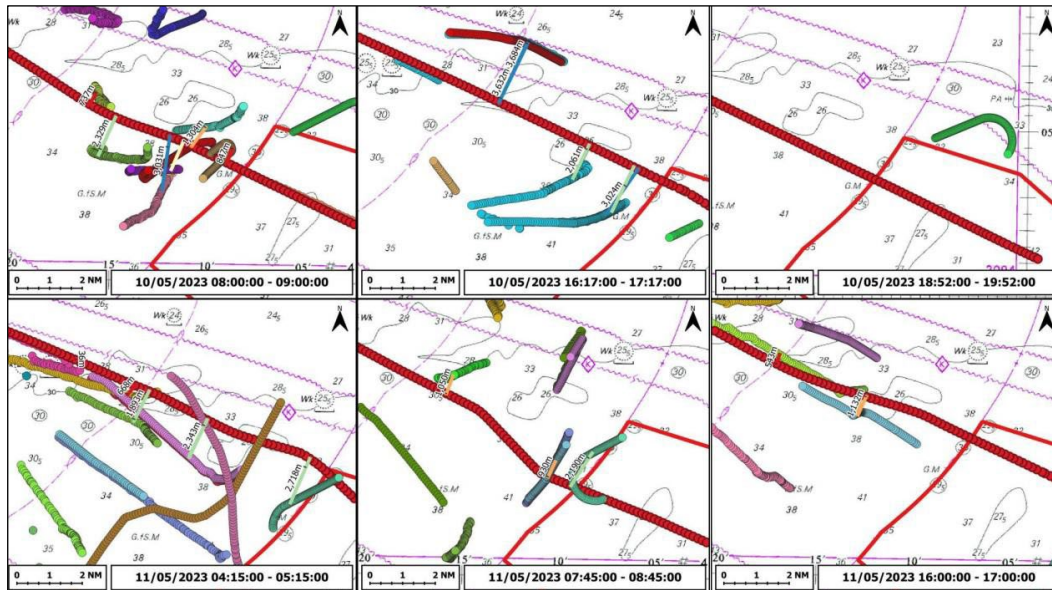
- 3.11.108. The final statement of common ground (SoCG) with Moir Vannin OWF Limited noted that an ongoing point of discussion remained unresolved following objections from IOMSPC to the acceptability of the gap between the Proposed Development and the Moir Vannin proposed structures boundary as revised to 4.1nm and recommended that this should be "*subject to the final decision of*" the SoS [\[REP6-082\]](#).
- 3.11.109. Stena's closing statement [\[REP6-095\]](#) elaborated its concerns related to navigational safety, essentially maintaining that any risk is unacceptable.
- 3.11.110. The MCA confirmed in its final SoCG its opinion that the navigational risk associated with the gap of 4.1nm is 'Tolerable and ALARP' subject to embedded and applied risk controls, hence not needing further mitigation (MC.SN.30 [\[REP6-080\]](#)).
- 3.11.111. The IoM TSC confirmed in its final SoCG that, following the hazard review session based on the additional January 2025 navigation simulations, the risk mitigation of the 4.1nm separation gap is now concluded to be ALARP, noting that concerns of commercial shipping companies remain and continued engagement with them by the Applicant is requested (TSC.SN.26 [\[REP6-079\]](#)).
- 3.11.112. The final SoCG with Trinity House, as the General Lighthouse Authority and a statutory consultee, agreed with the conclusions of the Applicant's NRA but deferred to the MCA regarding potential impacts on commercial shipping, search and rescue, radar, communications and positioning systems and so on [\[REP6-088\]](#).

***ExA considerations of potential impacts on navigational safety risks***

- 3.11.113. The ExA notes that NPS EN-3 recognises that risk is inherent in all shipping operations, and that the Applicant has made substantial efforts to agree with stakeholders that residual risks after application of mitigation and risk controls would be tolerable and ALARP.
- 3.11.114. The ExA notes that the evidence presented by the UKCoS of increased shipping industry concern about maritime traffic compression within corridors between OWFs. However, the ExA accepts the Applicant's evidence, noted at ISH3 and confirmed in [\[REP6-012\]](#), that the June 2024 Dutch Safety Board report on this topic of safety risks of corridors between OWFs as referenced by the UKCoS is concerned with a very different context and type of shipping to that which would be the case for this Proposed Development.
- 3.11.115. Furthermore, the ExA notes that the relevant ferry routes between Douglas and Heysham and Liverpool, and between Belfast and Heysham and Liverpool respectively have been confirmed by the MCA as "*strategic routes essential to regional, national and international trade*" but none of them constitute a "*sea lane essential to navigation*" and that there are no plans to propose the introduction of a new traffic separation scheme in the eastern Irish Sea [\[REP3-038\]](#).
- 3.11.116. The ExA comments that the IOMSPC note submitted following ISH3 [\[REP6-110\]](#) summarises two incidents of its vessels drifting with reduced power but does not confirm for how long or how far the vessels drifted and it does not appear from the submission that either vessel needed to drop emergency anchor.

- 3.11.117. At D6 the IOMSPC noted in its final SoCG its disagreement that a gap of 4.1 nm Morgan to Mooir Vannin would be sufficient for risks to be tolerable and ALARP unless speed restrictions were to be introduced for high-speed craft in circumstances of restricted visibility and potential interference with shipborne radar in close proximity to WTGs [\[REP6-078\]](#). The ExA considers that any speed restrictions as risk mitigation would be a matter for agreement post-consent between the MCA and the Applicant and between Mooir Vannin OWF Limited and the IoM TSC respectively, should consent be given for both projects. The ExA considers that this post-consent finalisation of risk mitigation for the Proposed Development is secured by the Vessel Traffic Management Plan (VTMP) to be discharged by the MMO advised by the MCA and by the necessary ERCoP required for compliance with MGN 654 under condition 25 in the draft DMLs.
- 3.11.118. The ExA notes the Applicant's report (paragraph 2.5.3.4 [\[REP6-065\]](#)) that the additional risk assessment workshop failed to result in complete agreement with IOMSPC and Stena on the acceptability or tolerability of risk in the sea space adjacent to both the Proposed Development and the Mooir Vannin OWF array. The ExA also notes that a ferry mitigation agreement with each of IOMSPC and Stena, addressing the commercial implications of ferry deviations that would be necessitated by the presence of the Proposed Development should a DCO be made, had been progressed but was not concluded by the close of the Examination.
- 3.11.119. Having been submitted at D6 close to the end of the Examination, there was no opportunity for written comment by IPs on the supplementary navigational safety review technical clarification note submitted by the Applicant [\[REP6-065\]](#) confirming the revised assessment of navigational safety risks related to the gap between the Proposed Development and Mooir Vannin OWF. That technical clarification note includes a useful history of the risk assessment carried out pre- and post-application (Executive Summary [\[REP6-065\]](#)). The ExA considers the note to be a suitably objective professional report that supports the conclusions drawn by the Applicant and agreed with the MCA and IoM TSC as the relevant regulatory authorities that with a pinch-point gap between structures of 4.1 nm navigational safety risks can be controlled to tolerable and ALARP.
- 3.11.120. [\[REP6-065\]](#) also contained evidence in the form of on-board radar plots from 2023 showing some past encounters with multiple vessels in or adjacent to IoM territorial waters navigated safely by IOMSPC ferry masters.
- 3.11.121. The ExA considers that Figure 32 below, submitted by the Applicant in [\[REP6-065\]](#) presents a good illustration of the baseline without the Proposed Development and the proposed Mooir Vannin OWF, and the radar tracks plotted show how ferries on occasion already need to slow or deviate to comply with COLREGS, irrespective of the presence of any offshore infrastructure. The ExA acknowledges that under international maritime conventions it is individual vessel masters who must make dynamic judgements on risk to safe passage.

**Figure 32: Example of radar plots in May 2023 on board an IOMSPC ferry encountering multiple vessels in and adjacent to IoM waters<sup>41</sup>**



- 3.11.122. The ExA notes the evidence submitted that the gap between the Proposed Development and Moir Vannin OWF is a ‘pinch-point’ gap with open water to the south-west rather than a continuing ‘corridor’ flanked on both side by structures, and that the risk assessment was carried out with conservative assumptions on likely vessel sizes and numbers of encounters.
- 3.11.123. Therefore, the ExA accepts the Applicant’s rebuttal at ISH3 of claims made by IOMSPC that the gap width should be increased to 5 nm, and of the argument by Stena that the configuration of the gap needing a change in vessel heading means that 4.1 nm was not sufficient to comply with MGN 654 guidance, as noted in agenda item 3(a)(11) on page 5 of [\[REP6-012\]](#) and paragraphs 20.1.1.1 and 20.1.1.2 of [\[REP6-004\]](#).
- 3.11.124. No further evidence was presented by IPs to justify why a 4.1 nm separation would not be sufficient to allow an assessment of residual risk as ALARP, nor why an increase of that pinch-point distance to 5 nm would make a significant difference to safety in the specific context of this configuration. The Applicant has produced extensive evidence of other navigable gaps between consented and operational OWFs that substantiate its NRA.
- 3.11.125. The ExA notes that NPS EN-3 paragraph 2.8.334 states that the SoS should make use of advice from the MCA. The MCA has been fully engaged with this NRA and has accepted the assessment of the Applicant and Moir Vannin OWF Limited that the increased gap of 4.1 nm combined with other mitigation and risk controls would reduce residual risk to ALARP [\[REP6-012\]](#).

<sup>41</sup> Source: ‘MVOWF gap’ navigational safety technical clarification note, Figure B.5 [\[REP6-065\]](#)

- 3.11.126. The ExA notes that the MCA accepted that the increase of gap width to 4.1 nm complied with its MGN 654 navigational safety guidance and with other risk controls applied would reduce risk to ALARP and tolerable.
- 3.11.127. Further, the ExA notes the endorsement of the IoM TSC of the assessment by Mooir Vannin Limited that the minimum 4.1 nm separation between OWFs (including at the gap between the proposed Mooir Vannin OWF structures boundary and the Proposed Development) would provide sufficient sea room to navigate safely in reasonable worst-case situations, noting that in particularly heavy weather, the preferable passage plan for ferry masters would route to the south and west of the Proposed Development rather than transit between the Proposed Development and the Walney OWFs and proposed Mooir Vannin OWF.
- 3.11.128. For all the reasons set out above, the ExA considers that the adjustments to structures boundaries made by both the Applicant and by Mooir Vannin OWF Limited such that the pinch-point gap between structures would be increased to a minimum of 4.1 nm are sufficient to justify an assessment by both developers that navigational risk in this space would therefore be controlled to a level that is tolerable and ALARP.
- 3.11.129. On that basis, should consent be given for both projects with that gap distance maintained at a minimum of 4.1 nm, then there would be no post-consent spatial delineation issues that would create transboundary jurisdictional difficulty.

#### **Impacts on marine communications and mobile radar operations**

- 3.11.130. The Applicant's closing statement [\[REP6-014\]](#) confirms its assessment that the impact of the Proposed Development on marine communications and vessel-borne radar operations would be of minor adverse effect and therefore not significant in EIA terms.
- 3.11.131. The SoCG with the MCA agrees with that assessment [\[REP6-080\]](#), as does the SoCG with UKCoS [\[REP6-075\]](#) and the SoCG with IoM TSC [\[REP6-079\]](#).
- 3.11.132. The final SoCG with the IOMSPC argued that additional mitigation would be needed for increased navigational risk on the basis that additional consideration to safety and speed must be given [by] "*... vessel skippers and ship masters where there are circumstances of restricted visibility and where ship's radar systems may also be subject to interference when in close proximity to wind turbines*" [\[REP6-078\]](#).
- 3.11.133. Stena Line in its final SoCG expressed a concern about uncertainty of effects [\[REP6-087\]](#) but the Applicant rejects that concern on the basis that a (cited) Swedish study noted that wider spacing between WTGs decreases interference effects and Stena vessels already transit at closer passing distances between operational wind farms in the Irish Sea that have WTGs much more closely spaced than the Proposed Development [\[REP6-014\]](#).

#### **ExA considerations about marine communications and radar operations**

- 3.11.134. The ExA accepts the Applicant's position that the impact of the Proposed Development on marine communications and vessel-borne radar operations would be of minor adverse effect and therefore not significant and considers the matter has no weight in the planning balance.
- 3.11.135. Considerations of impact to aviation radio communications and terrestrial radar operations are covered in section 3.5 of this Report.

### **Emergency response and co-operation and continued stakeholder engagement on marine navigational safety**

- 3.11.136. In [\[REP1-051\]](#) the MCA confirmed its satisfaction that an ERCoP would be adequately secured via the DMLs as part of condition 25 for compliance with MGN 654. Emergency response would also be considered in the Marine Pollution Contingency Plan to be agreed under DML condition 20(1)(e).
- 3.11.137. Stena Line raised in its interim SoCG at Deadline 1 (D1) the question of whether the Applicant could consider indemnifying shipping operators for losses or damages resulting from emergency use of anchors dropped in ‘force majeure’ situations subsequently fouling undersea cables (see SN.12, SN.19 and SN.26 [\[REP1-040\]](#)). At D3, the Applicant responded that this was a matter still under discussion [\[REP3-029\]](#).
- 3.11.138. The UKCoS expressed concern that additional towing capability or resource “*may well be required*” to mitigate “*additional navigational (allision, collision, drifting) risk from cumulative projects in the Irish Sea*” (see UKCoS.SN.23b [\[REP3-025\]](#)). This matter had not previously been raised in the Examination, as the previous iteration of the SoCG simply stated “*CoS reviewing relevant material*” regarding mitigation measures identified in the NRA (see UKCoS.SN.23 [\[REP1-030\]](#)).
- 3.11.139. ExQ2 SN2.8 [\[PD-009\]](#) sought to clarify whether emergency towing capability would be considered as a part of the post-consent development of ERCoP to satisfy the MCA. The MCA duly confirmed that post-consent assessment of towing capability would indeed be required via the final VTMP and would also be required to be contained in the ERCoP as developed, secured by compliance with MGN 654 under condition 25 in the draft DMLs [\[REP5-069\]](#).
- 3.11.140. At ISH3, the Northern Ireland Fish Producers’ Organisation (NIFPO) expressed its concerns on navigational safety in channels between offshore wind farms, noting that new forms of ship power and propulsion might increase the frequency of power ‘blackouts’ and consideration should be given to emergency towage. This submission was elaborated in writing following the ISH3, noting that the “*nearest salvage or rescue tug with sufficient bollard pull to assist large vessels in distress*” is currently based nearly 36 hours away from the Proposed Development, and would therefore not be able to assist in time-critical emergencies [\[REP6-097\]](#).
- 3.11.141. The MCA confirmed at ISH3 that it considers that the matter of how emergency towage might be made available to disabled vessels can be deferred to discharge of ERCoP DML conditions post-consent, as secured by the draft DCO [\[EV6-003\]](#).
- 3.11.142. A January 2025 stakeholder workshop held by the Applicant again discussed the UKCoS suggestion of the introduction of an Emergency Towage Vessel to manage the hazard of disabled vessels drifting towards OWF structures; the Applicant maintains its position that the cost of such a measure would not be proportionate to the level of risk and would have only limited effectiveness, giving reasons (section 4.3.3 [\[REP6-065\]](#)).
- 3.11.143. The final SoCG with UKCoS recognised the Applicant’s commitment to post-consent, pre-construction analysis of towing resource and reserved the UKCoS position until results of that analysis have been considered, however accepts that this “*does not preclude consent*” [\[REP6-075\]](#).



- 3.11.144. In the final signed SoCG with Stena Line the Applicant confirmed that it would not indemnify shipping operators from losses or damage to undersea cables incurred through emergency use of anchors during ‘force majeure’ situations. Stena Line maintained its serious concerns in respect of the effects on its operations (SN.12, SN.19 and SN.26 [\[REP6-087\]](#)).
- 3.11.145. In response to ExQ1 SN 1.4 [\[REP3-038\]](#) the MCA confirmed its advice that there is no need to secure in the DMLs the frequency of post-consent engagement with stakeholders.
- 3.11.146. In response to Action Point 17 from ISH1, the Applicant confirmed that participation in the Marine Navigation Engagement Forum (MNEF) is open to all sea users in the east Irish Sea [\[REP1-005\]](#). The MCA subsequently confirmed at ISH3 that the engagement facilitated by the MNEF would be a necessary control measure to mitigate risk to ALARP, in compliance with MCA guidance. At ISH3 the Applicant reaffirmed that the MNEF is an open forum (as noted in Table 1.14 of the outline VTMP) and its constituency is not exclusive. A clarification was added to the outline VTMP on this point at D6 (paragraphs 1.6.1.1 and 5.1.1.1 [\[REP6-055\]](#)).
- 3.11.147. ExQ2 SN2.7 [\[PD-009\]](#) asked the MCA, Stena and UKCoS to confirm if they considered that adequate security for post-consent stakeholder engagement would be provided by Commitment Co72 in the Commitments Register which commits to continued engagement of the MNEF post-consent, and if not, why not.
- 3.11.148. Stena reserved its position on this matter, referring to ongoing direct discussions with the Applicant [\[REP5-088\]](#). Further to that response, Stena confirmed that it welcomes commitment Co72 in the Commitments Register to continuation of the MNEF post-consent. Stena reiterated its position that the MNEF alone would not provide the comfort Stena require regarding the commercial consequence of navigational safety risk mitigation on its operations [\[REP6-095\]](#).
- 3.11.149. The UKCoS confirmed satisfaction in principle with security for post-consent stakeholder engagement noting its opinion that the MNEF should have specific targets, objectives and agreed means of redress determined by its members [\[REP5-092\]](#).
- 3.11.150. The Ørsted IPs maintained there was not adequate security for post-consent stakeholder engagement via the MNEF and sought to be specifically named as consultees in the Outline VTMP (ExQ2 SN 2.7) [\[REP5-059a\]](#). The Applicant reiterated its position that it would be neither necessary nor appropriate for a commercial organisation to be named in the VTMP, and that the MNEF is not required under any shipping and navigation guidance or legislation, and that no concerns have been raised by the MCA on this matter [\[REP6-005\]](#).
- 3.11.151. Harbour Energy submitted very late in the Examination that whilst it accepts that the issuing of Notices to Mariners through the Marine Navigation Forum is routinely undertaken, relying solely on this method allows for little, if any, advance planning and coordination of activities and provides neither party with safeguards to prevent disruption and economic loss [\[REP6-111\]](#).
- 3.11.152. In response to the Rule 17 request from the ExA for further information [\[PD-012\]](#), the Applicant reiterated its position that interaction on marine coexistence with Harbour Energy can and should be managed through the sharing of information through the MNEF (Appendix B, page 51 [\[REP7-004\]](#)). Harbour Energy remained concerned about marine access during its decommissioning activities and

contended that a formal agreement is needed that covers both aviation and marine access, or that protective provisions should be included in a DCO if made [\[REP7-014\]](#) (as further set out in section 3.12 of this Report).

***ExA considerations about ERCoP and continued stakeholder engagement***

- 3.11.153. The ExA is satisfied that the hazard of vessels drifting having lost power has been adequately identified and included in the Applicant's NRA. The ExA is also satisfied that provision of emergency towing resource can be a post-consent matter for ERCoP development in liaison with the relevant authorities as secured in the draft DMLs.
- 3.11.154. The ExA notes that discussions between the Applicant and Stena Line about indemnity to ship owners or operators for damage to undersea cables or losses incurred through emergency use of anchors during 'force majeure' situations were not brought before the Examination other than as passing references in the evolving SoCG. The Stena RR did not include this matter and was not followed up with a further written representation before the Stena closing statement. Here it argued for the indemnity on the basis that without the Proposed Development there would be no hazard of cables to be fouled by emergency anchoring, and restated its serious concerns about potential adverse operational effects arising from impacts of the Proposed Development both alone and cumulatively [\[REP6-095\]](#).
- 3.11.155. The ExA understands that this is a matter within the commercial side agreement being negotiated between Stena and the Applicant and therefore it would not be reasonable for such an indemnity to be a requirement of the recommended DCO. No other stakeholder has come forward with a demand for such indemnity.
- 3.11.156. The ExA agrees with the position stated by the Applicant in its commercial side agreements tracker (page 3 [\[REP6-023\]](#)) that it does not consider that protective provisions for Stena Line are necessary or justified. The ExA makes observations in the section below on commercial side agreements between the Applicant, Stena Line and IOMSPC.
- 3.11.157. Because the Applicant has committed in the revised outline VTMP that the MNEF would be open to any stakeholder [\[REP6-055\]](#), the ExA is satisfied with the commitments secured by the draft DCO for ongoing engagement with shipping and navigation stakeholders on matters of navigational safety, marine traffic management and emergency response co-operation, including with Harbour Energy regarding vessel movements during its decommissioning activities as discussed further in section 3.12.
- 3.11.158. Other matters concerning the Ørsted IPs and Harbour Energy are covered in section 3.12 of this Report.

***Consequential effects on timetabled ferry and port operations***

- 3.11.159. Safeguarding objections to the Application related to adverse weather deviations of timetabled ferry services were submitted by the IOMSPC [\[RR-016\]](#) and the IoM TSC who noted that the economy of the IoM is highly reliant on the regular, safe shipping for its goods, and any deviations from well-established timetables and daily deliveries via the Isle of Man Steam Packet Company [\[RR-015\]](#).
- 3.11.160. The UKCoS also stated (pages 305 to 306 ([\[RR-041\]](#))) that the cumulative impact to the commercial shipping industry of the Proposed Development in addition to the proposed Mona and Morecambe OWFs "... is unprecedented in its simultaneous

*nature ... with potential negative economic impact to island communities which need full consideration”.*

- 3.11.161. Stena Line confirmed its concerns about the impact of additional passage duration from deviation around OWFs and the effect this would have on its increased carbon emissions along with its associated carbon tax, and on its bunker consumption and turn-around times in port [[RR-039](#)].
- 3.11.162. Klosinski Economic Development Ltd [[RR-018](#)] and David Wertheim [[RR-112](#)] made brief representations about socio-economic and supply chain impact related to impact on navigation risk and potential for consequential cancellations of service, although played no further part in the Examination. Andrew King [[RR-085](#)] expressed concern about the consequences of cancellation of ferry services for the IoM and its economy but again played no further part in the Examination.
- 3.11.163. The ExA received no other representation on potential impact to port operations from the relevant ports of Douglas, Heysham, Liverpool or Belfast.
- 3.11.164. ExQ1 SN.1.10 [[PD-004](#)] invited the IOMSPC to submit its own analysis of potential effects of route deviations necessitated by the Proposed Development, including in-port operations.
- 3.11.165. As part of its response to ExQ1 SN 1.10, IOMSPC contended that an increase in carbon dioxide emissions would also incur extra costs to achieve required statutory compliance and clarified that any increase in vessel passage duration also has implications on ability to maintain scheduled service timing and in particular the time available for in-port operations, which may not be able safely to be speeded up, and therefore delayed arrivals may result in delayed departures, and on some occasions a vessel may be restricted by the depth of water available at low tide and be forced to depart *“regardless of passengers or freight in order to maintain a safe under-keel clearance ... In such circumstances, passengers and/or freight may have to be left behind”*. IOMSPC further explained that this circumstance, or cancelled sailings or delayed departures are *“highly detrimental to the operation of a lifeline passenger service vital to the IoM’s economy”* and that the number of sailings undertaken in a given period are also monitored by the IoM government under the ‘Strategic Sea Services Agreement’ with the IOMSPC [[REP3-034](#)].
- 3.11.166. The Applicant responded [[REP4-007](#)] by noting that:
- Historical vessel traffic data shows that without the Proposed Development or other cumulative developments there is a significant variation in the transit time and turnaround time in ports of IOMSPC vessels
  - The IOMSPC website defines sailings as punctual if they depart within 15 minutes of the scheduled time
  - The assessed effect of route deviation caused by the Proposed Development in more than 95% of sailings is between 1.6 and 3 minutes additional transit time which is minimal in relation to the normal variance in turn round time
- 3.11.167. The Applicant rebutted several elements of the IOMSPC’s submission in [[REP4-007](#)] and argued that among other matters of contention claimed that the Proposed Development would not reduce the opportunity for vessels to take alternative adverse weather routes and that safe routes would continue to be available, as demonstrated by the navigation simulations carried out, therefore, there is no reason why vessel masters would cancel sailing on the grounds of passage safety, because the primary causes of cancellations were understood to be

excessive wind speed which prevents safe access to ports and harbours or mechanical issues.

- 3.11.168. Having received no response from Stena to ExQ1 SN1.11 regarding evidence to support its RR, ExQ2 SN2.9 [\[PD-009\]](#) again invited Stena to submit further evidence about likely effects to their adverse weather routing, including any likely significant social or economic or carbon emissions effects. Stena deferred its answer until its closing statement [\[REP6-095\]](#), confirming its view that the cumulative effect of ferry deviation of adverse weather routing to the north of the IoM would present a significant operational and commercial challenge, and that it was impossible at this stage to quantify accurately the effect of the Morgan Generation Assets project alone.
- 3.11.169. IOMSPC did not answer ExQ2 SN2.9 directly but combined its answer with that to ExQ2 SN2.10 noting that in a typical year approximately 1300 crossings can be made, and if sailing the extra 1nm per trip route option this would correspond to an extra 1300nm worth of fuel consumption and emission output for the shorter route (North of Morgan) route option alone [\[REP5-078\]](#).
- 3.11.170. ExQ2 GEN 2.12 [\[PD-009\]](#) asked the Applicant to comment on whether the recent legal cases of *R. (on the application of Finch on behalf of the Weald Action Group) v Surrey County Council [2024] UKSC 20* and *Friends of the Earth Ltd and South Lakeland Action on Climate Change v SSLUHC [2024] EWHC 2349 (Admin)*, have any implications for the assessments of greenhouse gas (GHG) emissions. The Applicant responded with an extensive answer [\[REP5-015\]](#), the summary of which is that it:
- ...does not consider that the recent high court ruling Friends of the Earth Ltd & South Lakeland Action on Climate Change vs SSLUHC [2024] EWHC 2349 (the FoE Case), which also draws on the recent decision of R (Finch on behalf of the Weald Action Group) v Surrey County Council [2024] UKSC 20 (the Finch Case) has any implications for the assessment of carbon emissions undertaken in Volume 2, Chapter 12: Climate change*
- 3.11.171. At D5 and at ISH3, some progress was reported by the Applicant on negotiating a Ferry Mitigation Agreement with each shipping line, specifying that these side agreements would be limited to commercial matters, and noting that these agreements are voluntarily proposed, and not necessary for policy compliance.
- 3.11.172. The Applicant's closing statement [\[REP6-014\]](#) confirmed its assessment that during periods of adverse weather to maintain passenger safety and comfort, masters may choose a passage plan to deviate south of the Morgan Array Area which would require an additional deviation of 21.5 minutes for the IOMSPC Heysham-Douglas lifeline ferry service hence a moderate adverse effect was determined within ES Chapter 7, but the Applicant notes this would affect approximately 20 of 1,450 crossings per year.
- 3.11.173. Pending conclusion of a side agreement between parties on the commercial implications of ferry deviations, Stena's closing statement maintained objection to the project on the basis that the Proposed Development in combination with other projects would "*almost certainly*" have significant adverse impacts to shipping in the northern Irish Sea in adverse weather conditions leading to a "*considerable increase*" in its operational costs, and Stena included as an annex proposed protective provisions [\[REP6-095\]](#). Regarding progress on the ferry mitigation agreement with the Applicant referred to above, Stena stated that it was hopeful that

satisfactory terms can be agreed, and Stena undertakes to inform the SoS as and when an agreement with the Applicant is completed.

- 3.11.174. The Applicant's closing statement [REP6-014] concluded its assessment of impacts to Stena Line ferry services that, during adverse weather, Stena Line masters on both the Heysham-Belfast and Liverpool-Belfast services (which are not lifeline services) may choose to navigate in more sheltered water east of the IoM, necessitating a deviation west of the Morgan Generation Assets and potentially west also of the proposed Mona and Mooir Vannin OWF projects. The Applicant assessed that this would require an additional 61 to 68 minutes of additional transit time depending on route and the deviation time effects would be significant and moderate adverse effect, but because this route east of the IoM is more than 15 nm or approximately one hour's steaming time longer than the alternative adverse weather route to the west of the IoM, masters may choose the latter if sea state would not too adversely affect its operations.
- 3.11.175. The ExA's Rule 17 letter following D6 asked the Applicant to provide a 'without prejudice' comment on the draft protective provisions proposed by Stena Line (SN 3.4 [PD-012]). The Applicant responded that it continues to hold the position that protective provisions for Stena are neither necessary or justified as had been set out earlier in [REP6-014], because there is no policy or legislative imperative to provide protective provisions for an IP that is not a statutory undertaker and the mitigation requested is not a matter that needs to be secured through the DCO to make the Proposed Development acceptable in planning terms and therefore does not meet the policy test in paragraph 4.1.16 of NPS EN-1; and the Applicant argued further that the mitigation sought is a purely commercial matter to be resolved between parties, and remains confident that the side agreement being negotiated can be reached "*with reasonable and appropriate terms*" [REP7-004].
- 3.11.176. The signed final SoCG with IOMSPC noted that there is a non-disclosure agreement in place for the mitigation agreement and discussions are continuing "*with a view to reaching agreement on residual operational impacts relating to adverse weather routing...Any mitigation agreement with the Applicant concerns IoM Steam Packet's technical and operational requirements*". The IOMSPC defers to the IoM government on any adverse socio-economic effects from disruption to ferry sailings [REP6-078].
- 3.11.177. The final signed SoCG with the IoM TSC records that (subject to confirmation in due course from the IOMSPC of its commercial side agreement with the Applicant to offset the residual adverse impact on shipping operations being agreed in principle) it is minded to agree the Applicant's assessment that subject to the mitigation measures proposed there would be no residual effects on socio-economics receptors from the Proposed Development alone and cumulatively with other projects that would be significant in EIA terms (see TSC.SE.12 [REP6-079]).

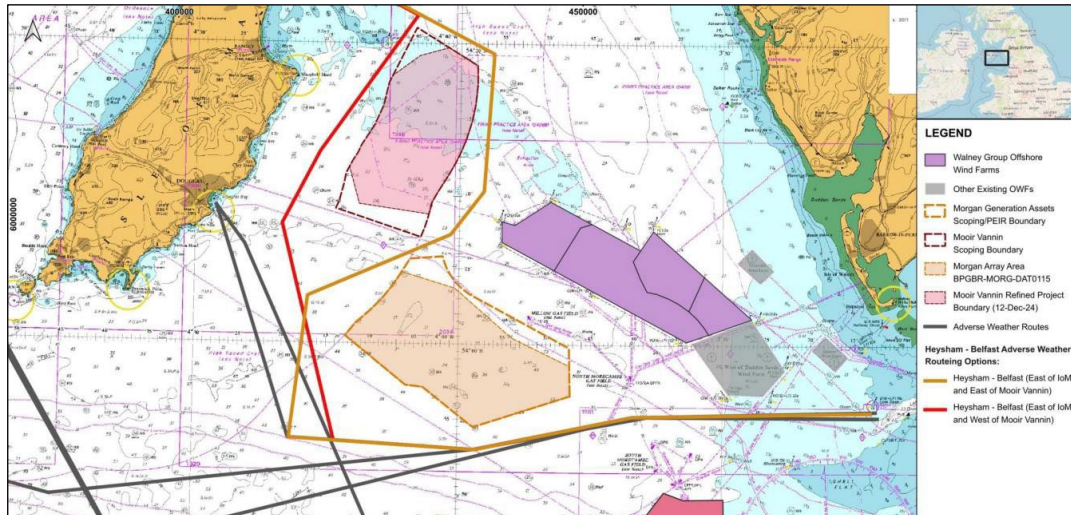
**ExA considerations about impacts on timetabled ferry and port operations**

- 3.11.178. The ExA accepts the Applicant's assessment that residual impact of the Proposed Development on shipping operations would be moderate adverse in all phases and therefore significant in EIA terms.
- 3.11.179. The navigational safety review technical report submitted at D6 by the Applicant contained further assessment of the possible impact of the presence of the Proposed Development and the proposed Mooir Vannin OWF on adverse weather routing of Stena ferries between Liverpool or Heysham and Belfast.



3.11.180. Figure 33 below illustrates baseline and likely future adverse weather route deviations for both Stena and IOMSPC ferry services between Heysham, Liverpool, Douglas and Belfast. The figure elaborates the multiple course changes that would be needed to pass to the east of the IoM and therefore the ExA accepts the conclusion that Stena masters would more likely take the alternative route south and west of the IoM than the more complicated adverse weather passage between the Proposed Development and the IoM, if the Moir Vannin OWF were to be consented and constructed.

**Figure 33: Illustration of multiple course changes needed for Stena ferries to pass to the east of the IoM in adverse weather between Liverpool or Heysham and Belfast<sup>42</sup>**



3.11.181. With regard to NPS EN-3 paragraph 2.8.347, which requires that the SoS should give adverse effects substantial weight in its decision-making “(w)here a proposed development is likely to affect the future viability or safety of an existing or approved/licensed offshore infrastructure or activity”, the ExA considers that no compelling evidence has been presented that demonstrates that the future viability or safety of existing ferry services would necessarily be affected by the impacts of the Proposed Development, although the ExA acknowledges that constraints on manning levels are likely to be experienced by the IOMSPC as their services have a single bridge team who do not live aboard the vessel, and “[d]ue to the complexity of operator schedules and the interrelationship between metocean conditions and operational impacts the effects of this would vary each day, but it is credible that services could be cancelled more frequently” (paragraph A.2.1.1.31 [APP-025]).

3.11.182. The ExA also accepts the Applicant’s assessment that appreciably longer transit times caused to Stena Line’s Heysham to Belfast ferry services due to deviation around the Proposed Development in adverse weather (both alone and in combination with other cumulative projects) would be a moderate adverse and significant effect. The ExA notes that NPS EN-3 paragraph 2.8.329 states that where development is “likely adversely to affect major commercial navigation routes, for instance by causing appreciably longer transit times” the SoS should give such adverse effects substantial weight in its decision making.

<sup>42</sup> Source: ‘MVOWF gap’ navigational safety technical clarification note, Figure 3.6 [REP6-065]

- 3.11.183. However, the ExA agrees with the Applicant that the interrelated residual environmental, social and economic effects in relation to necessary deviation of ferry and shipping routes would be minor adverse subject to mutually satisfactory and secure commercial side agreement with both Stena Line and IOMSPC, neither of which were reported as concluded by the close of the Examination (Table 13.89 [APP-017] and Tables 15.17 and 15.18 [APP-019]).
- 3.11.184. Paragraph 2.8.178 of NPS EN-3 recognises that for offshore wind farms “*it is inevitable that there will be an impact on navigation in and around the area of the site*” and paragraph 2.8.183 of NPS EN-3 identifies that “*... reorganisation of shipping traffic activity might be both possible and desirable when considered against the benefits of the wind farm*”.
- 3.11.185. The ExA agrees with the position that protective provisions for Stena Line are neither necessary or justified, as re-stated by the Applicant in its response to the ExA’s Rule 17 letter [REP7-004].
- 3.11.186. The ExA recommends that the SoS should satisfy themselves that the commercial side agreements (which are subject to Non-Disclosure Agreements and which were not concluded at the close of the Examination) are concluded to the mutual satisfaction of the Applicant and IOMSPC and Stena Line respectively and acknowledged by the IoM TSC, noting that the IoM TSC agreement to the assessment of significance of socio-economic impacts is conditional on the conclusion of a commercial side agreement with IOMSPC.
- 3.11.187. The ExA considers that social, economic and environmental effects of the Proposed Development in relation to necessary deviation of ferry and shipping routes were adequately considered in the Application in accordance with paragraph 5.14.4 of NPS EN-1 and in relation to overall net benefits of the Proposed Development (including increased fuel consumption and GHG emissions and associated economic costs as well as potential impact on crew manning levels and on lifeline ferry service to the IoM population).
- 3.11.188. The ExA accepts the Applicant’s assessment of negligible adverse effects to access to ports and harbours in all phases of the Proposed Development and accepts that potential impacts of the Proposed Development have been considered in relation to mitigation proposals from the Applicant and environmental and climate change benefits the Proposed Development would deliver.
- 3.11.189. The ExA considers that the Application complies with NPSfP paragraphs 5.14.6 and 5.14.7 and that the Applicant’s assessment of the inter-related social and economic residual effects of the Proposed Development in relation to necessary deviation of ferry and shipping routes would be minor adverse and not significant in EIA terms if mutually satisfactory and secure commercial side agreements can be concluded by the Applicant with both Stena Line and IOMSPC, and because there has been no specific evidence presented to support assertions by other IPs of potential adverse socio-economic impacts of the Proposed Development in relation to in-port operations of ferry companies.
- 3.11.190. The ExA notes that IPs did not produce evidence to contend with the Applicant’s assessment of GHG emissions effects of shipping deviations resulting from impacts of the Proposed Development. The ExA has no reason to disagree with the Applicant’s assessment of lack of relevance of the FoE or the Finch cases to the assessment of shipping and navigation GHG emissions. GHG emissions are

discussed further in section 3.2 of this Chapter, and impacts on GHG emissions related to impacts to other offshore OWFs are discussed in section 3.12.

- 3.11.191. The ExA considers that there are no other important and relevant shipping and navigation matters for the attention of the SoS beyond those discussed in this section.

## CONCLUSIONS

- 3.11.192. The ExA is satisfied that that the Proposed Development would not present unacceptable risk to or unacceptable interference with navigation offshore or to human health and public safety, subject to mitigation commitments secured by recommended DCO and the DMLs.
- 3.11.193. The ExA notes that it is ultimately for the owners and masters of vessels to determine whether safety risks on passage are acceptable or not, and to plan passage routing accordingly.
- 3.11.194. The ExA is satisfied that the Applicant has demonstrated that navigational risks associated with the Proposed Development can be satisfactorily mitigated and managed. The ExA also considers that appropriate mitigation, monitoring and adaptive management, including compliance with international navigational safety obligations, would be secured in the recommended DCO, on the assumption that vessel masters and operators will comply with international obligations within SOLAS Chapter V, COLREGs, STCW and national regulations and guidance.
- 3.11.195. The ExA concurs with the Applicant's assessment that the overall significance of effect from the impact of the Proposed Development on shipping and navigation would be moderate adverse and significant in EIA terms including any encroachment on strategically important navigation routes. The ExA also agrees that while the relevant ferry routes between Douglas, Heysham, Liverpool and Belfast are strategic routes essential to regional, national and international trade none of the routes constitute a "*sea lane essential to navigation*", as confirmed by the MCA in [\[REP3-038\]](#).
- 3.11.196. Based on the evidence presented and discussed above, the ExA concludes that policy obligations in NPS EN-3 paragraphs 2.8.179, 2.8.184, 2.1.185, 2.1.187 to 2.8.195, 2.8.197, 2.8.199, 2.8.326 to 2.8.331, 2.8.335 and 2.8.346 have been complied with.
- 3.11.197. The ExA concludes that the Application complies with paragraphs 5.14.6 and 5.14.7 of the NPSfP for the reasons given in paragraphs 3.11.188 and 3.11.189 above, and that there has been a lack of evidence submitted to justify further measures to be secured to protect the efficiency and resilience of continuing port operations.
- 3.11.198. The ExA also concludes that the SoS can be satisfied that obligations of MPS paragraph 3.4.7 have been fulfilled because negative impacts on shipping and navigational safety and environmental, social and environmental effects and matters of international maritime law have been considered and suitable mitigations secured by the recommended DCO.
- 3.11.199. The ExA is also satisfied that the Proposed Development would be compliant with policies NW-PS-1, NW-PS-2 and NW-PS-3 of the NWMP, because evidence presented demonstrates that there are exceptional circumstances of environmental and climate change benefits of the Proposed Development.

- 3.11.200. The ExA agrees with the Applicant's assessment of moderate adverse effects of additional passage durations for ferry service operators in adverse weather conditions from impact both of the Proposed Development alone and cumulatively, and the absence at close of the Examination of the security for mitigation of those adverse effects that would be afforded by commercial side agreements with the IOMSPC and Stena Line respectively, the ExA attributes to shipping and navigation impacts of the Proposed Development both alone and cumulatively with other projects moderate weight against the making of a DCO. Therefore, the ExA concludes that NPS EN-3 paragraph 2.8.347 is also satisfied.
- 3.11.201. However, the ExA agrees with the Applicant that the inter-related social and economic residual effects of the Proposed Development in relation to necessary deviation of ferry and shipping routes would be minor adverse and not significant in EIA terms if mutually satisfactory commercial side agreements can be concluded by the Applicant with both Stena Line and IOMSPC. Other socio-economic impacts beyond those to shipping and navigation are discussed in section 3.13 of this Report.
- 3.11.202. In the event that the SoS is able to be satisfied at the time of decision-making that the commercial side agreements regarding compensation for adverse effects on ferry service operations have been satisfactorily concluded between the Applicant and the IOMSPC and Stena Line respectively, the ExA's recommendation on weighting would be decreased from moderate weight against to a little weight against the making of the Order.

## **3.12. OTHER OFFSHORE INFRASTRUCTURE AND SEA USERS**

### **INTRODUCTION**

- 3.12.1. This section considers the effects of the proposed development on other sea users and offshore infrastructure located within and around the Irish Sea. It should be noted that whilst the effects on access for helicopters to existing oil and gas installations in the Irish Sea is included in the Applicant's environmental statement (ES) relating to aviation and radar, this matter has been considered throughout the Examination and this Report as part of other offshore infrastructure.
- 3.12.2. In its consideration of the topic the ExA has had regard to National Policy Statement (NPS) for Renewable Energy Infrastructure EN-3 as set out in section 2.8 (offshore wind) in particular paragraphs 2.8.44, 2.8.196 to 198, 2.8.342 to 345 and 2.8.348 which specifically relate to other offshore infrastructure. Regard has also been had to section 5.5 of NPS EN-1 in relation to civil and military aviation. There are also policies of relevance in the North West Inshore and North West Offshore Marine Plan (NWMP).

### **THE APPLICATION**

- 3.12.3. ES Volume 2, Chapter 9: Other Sea Users [[APP-027](#)] presents the assessment of the potential impacts of the Proposed Development on other sea users and offshore infrastructure. It presents the existing environmental baseline, identifies any assumptions or limitations encountered in compiling the environmental baseline information and presents the potential environmental effects of the proposed development on other sea users during the construction, operation and maintenance and decommissioning phases, together with any proposed mitigation measures as relevant.



- 3.12.4. ES Chapter 9 is supported by ES Volume 4, Annex 9.1: Radar early warning technical report [\[APP-063\]](#). There is also some overlap with the following topics also considered within this chapter: overarching issues (including consideration of climate change and effects on net greenhouse gas (GHG) emissions, alternatives and other Irish Sea projects) (sections 3.2 to 3.4), aviation and radar (3.5), shipping and navigation (3.11) and socio-economics (3.13).
- 3.12.5. ES Volume 2, Chapter 11: Aviation and radar [\[APP-015\]](#) presents the assessment of the potential impacts of the Proposed Development on aviation and radar which is considered in section 2.5 of this Report.
- 3.12.6. ES Volume 4, Annex 11.1: Aviation and radar technical report [\[APP-045\]](#) includes at Appendix A the Applicant's helicopter access report (HAR) which details access to current Irish Sea oil and gas installations in the vicinity of the Proposed Development.

### **Baseline**

- 3.12.7. A range of guidance has been considered by the Applicant as part of the baseline methodology, as set out in paragraph 9.4.1.1 of [\[APP-027\]](#) and paragraph 11.4.1.1 of [\[APP-015\]](#).
- 3.12.8. Table 9.5 [\[APP-027\]](#) summarises the potential impacts scoped into the ES during all phases. The impacts are related to both the installation and presence of wind turbines, offshore substation platforms (OSPs), cables and associated vessel movements, and the safety zones associated with both construction and maintenance. Scoped in impacts include:
- The displacement of recreational activities
  - Reduction or restriction of other offshore energy activities – including offshore wind, oil and gas operations, cables and pipelines, carbon capture and storage (CCS) and underground gas storage
  - Interference with the performance of radar early warning systems (REWS) located on oil and gas platforms
  - Rerouted traffic on REWS alarm rates
- 3.12.9. Scoped out effects not considered likely to be significant, with justification, are presented in table 9.6. Scoped out potential impacts include:
- Increased suspended sediment concentrations (SSCs) and associated deposition affecting aggregate areas
  - Alterations to sediment transport pathways affecting aggregate areas
  - Increased SSCs and associated deposition affecting recreational diving and bathing sites
  - Interference with offshore microwave fixed communication links
- 3.12.10. Figures 9.1 to 9.8 [\[APP-027\]](#) show the study area and the range of other offshore infrastructure and sea users contained within and around it, as well as the other projects, plans and activities screened into the CEA. The other sea user receptors are grouped into regional, local and REWS study areas and the study areas vary of each as explained in section 9.4.3. The cumulative study area is wider, extending to 50km from the array area.
- 3.12.11. The range of key data sources and desktop reports is set out in section 9.4.4 and table 9.7 [\[APP-027\]](#). No site-specific surveys have been undertaken to inform the Environmental Impact Assessment (EIA) for other sea users, given the amount of

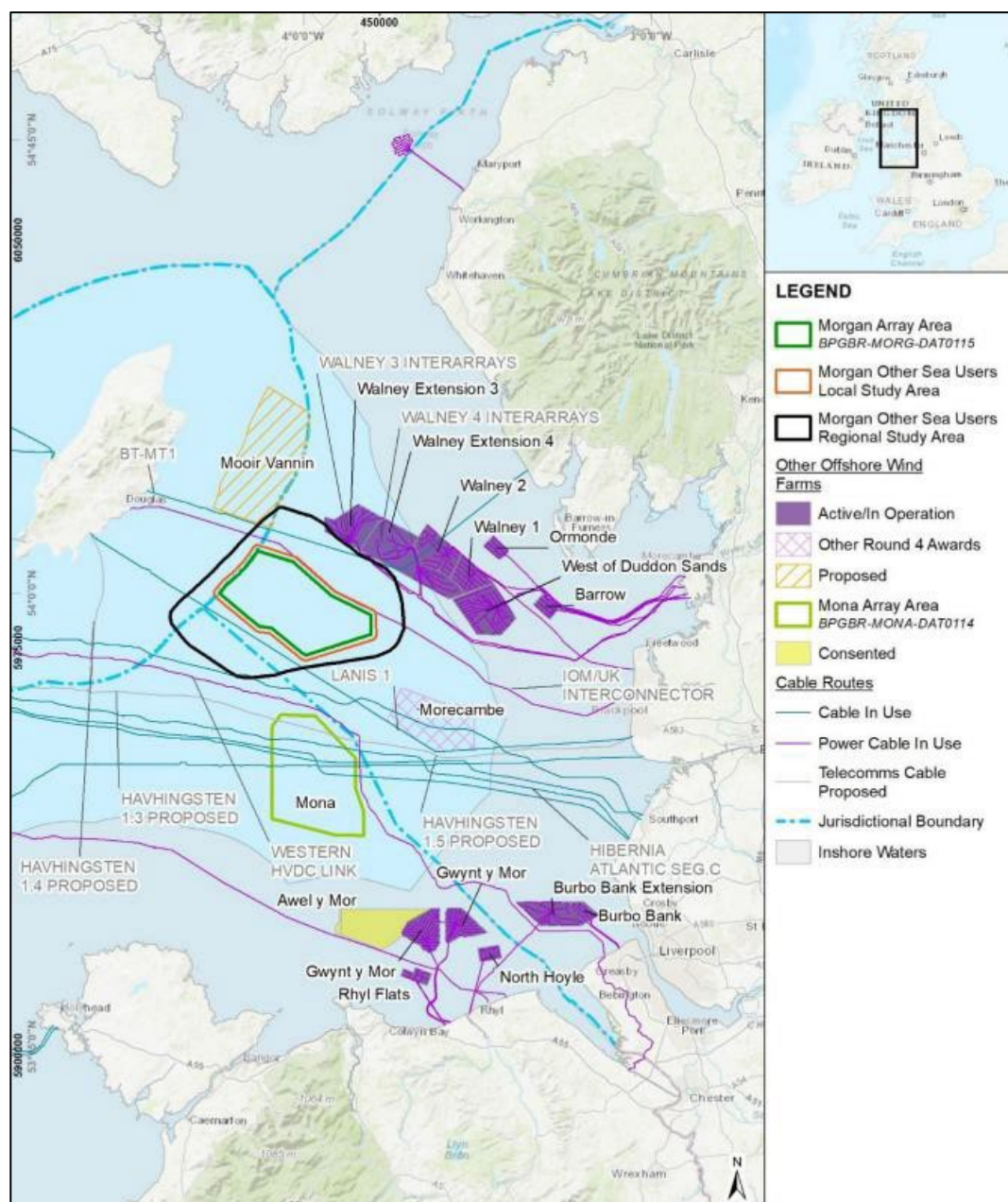


information already available from the desktop sources together with the consultation responses. The baseline environment is described in section 9.5.

## Offshore wind farms

3.12.12. Figure 9.4 [APP-027], reproduced below (Figure 34) displays the other offshore wind farms (OWF) and cables within the vicinity of the order limits.

**Figure 34: Other offshore wind farms and cables within the vicinity of the Morgan Generation Assets<sup>43</sup>**



<sup>43</sup> Source: ES Volume 2, Chapter 9, Figure 9.4 [APP-027] – do not scale.

- 3.12.13. The OWFs in the east Irish Sea as considered within the ES are listed in Table 3 below including their capacity and distance from the order limits, identifying those which are operational, in planning, consented and proposed.

**Table 3: Offshore wind farms in the east Irish Sea<sup>44</sup>**

| Name                          | Capacity (MW) | Operator                                        | Distance to Morgan Array Area (km) |
|-------------------------------|---------------|-------------------------------------------------|------------------------------------|
| <b>Operational OWFs</b>       |               |                                                 |                                    |
| Walney Extension (3 and 4)    | 659           | Ørsted (Walney Extension Limited)               | 8.1                                |
| Walney 2                      | 184           | Ørsted (Walney (UK) Offshore Windfarms Ltd)     | 13.3                               |
| West of Duddon Sands          | 389           | Morecambe Wind Limited                          | 15.4                               |
| Walney 1                      | 184           | Ørsted (Walney (UK) Offshore Windfarms Limited) | 16.3                               |
| Ormonde                       | 150           | Ormonde Energy Ltd                              | 24.4                               |
| Barrow                        | 90            | Ørsted (Barrow Offshore Wind Limited)           | 30.1                               |
| Gwynt y Môr                   | 576           | RWE Renewables                                  | 51.5                               |
| Burbo Bank Extension          | 259           | Ørsted (Burbo Extension Ltd)                    | 56                                 |
| Rhyl Flats                    | 90            | RWE Renewables                                  | 60.5                               |
| North Hoyle                   | 60            | RWE npower renewables                           | 61.1                               |
| Burbo Bank                    | 90            | Ørsted Burbo (UK) Limited                       | 61.6                               |
| <b>Round 4 NSIPs</b>          |               |                                                 |                                    |
| Mona                          | 1500          | bp/ EnBW                                        | 11.1                               |
| Morecambe                     | 480           | Morecambe Offshore Windfarm Limited             | 11.2                               |
| <b>Consented NSIPs</b>        |               |                                                 |                                    |
| Awel y Mor                    | 1100          | RWE Renewables                                  | 46.8                               |
| <b>Proposed (Isle of Man)</b> |               |                                                 |                                    |
| Mooir Vannin                  | 1400          | Ørsted                                          | 4.8                                |

- 3.12.14. Paragraphs 9.5.2.6 to 9.5.2.15 of [\[APP-027\]](#) set out the Applicant's consideration of the existing and proposed OWFs. This includes its reasoning for excluding effects on wind distribution (wake loss) from the ES. The Applicant explains that the Crown Estate's leasing process for Round 4 projects specified that no new projects could be located within 7.5km of an existing OWF (increased from an initial proposed distance of 5km as used in Round 3). The distance from the proposed development to the existing operational OWFs varies from around 8.1 km to 61.6 km as shown in Table 3 above.

- 3.12.15. Paragraph 9.5.2.11 of [\[APP-027\]](#) explains that the northeastern boundary of the Proposed Development array area was altered following receipt of pre-application consultation responses as described in ES Volume 1, Chapter 4: Site selection and consideration of alternatives [\[APP-011\]](#). The distance to the nearest OWF (Walney Extension) was increased by 0.6 km to 8.1 km, predominately based on feedback from shipping and navigation stakeholders. The Applicant considers that its

<sup>44</sup> Source: ES Volume 2, Chapter 9, Table 9.8 [\[APP-027\]](#)

exceedance of the Crown Estate's 7.5 km spacing criteria is such that it should not be considered to be 'close' to the other operational schemes for the purposes of NPS EN-3 paragraph 2.8.197.

- 3.12.16. It goes on to explain that there is no policy or OWF guidance securing the process by which to scope in and assess, in EIA or socio-economic terms, the operational effects of one OWF's wind distribution on a neighbour for all stages of the lifespan of the proposed development. On this basis, the Applicant does not consider the potential for such effects further in its assessment.

### **Oil and gas operations**

- 3.12.17. Paragraph 11.4.3.10 of [\[APP-015\]](#) explains the CAA recommended consultation zone of 9 nm radius around offshore helicopter decks on hydrocarbon platforms which is to provide airspace for the safe operation of helicopter instrument approaches in poor weather conditions where a low visibility approach profile is needed. The installations within 9 nm are shown in table 11.10, with the nearest being the Millom field.
- 3.12.18. Figure 9.6 of [\[APP-027\]](#) shows the offshore oil and gas installations and pipelines in the vicinity of the proposed development, of which there are none within the local other sea users study area. Millom West platform, a normally unmanned installation (NUI) operated by Chrysaor Resources (Irish Sea) Limited (Harbour Energy), is located 2.96 km (1.6 nm) from the proposed development. Paragraph 9.5.2.18 explains that the Millom West platform is planned to be decommissioned, and vessel access will be required from 2024 to approximately 2030.
- 3.12.19. Millom East is located 2.07 nm to the east of the order limits and comprises a wellhead for subsea structures including a pipeline end manifold (PLEM) and wellhead protection structure (WHPS) which are also planned to be decommissioned, and vessel access will be required from 2027 to approximately 2032.

### **Other users**

- 3.12.20. There are no carbon capture and storage or underground gas storage projects within the study area. There is one operational power cable, the UK/ Isle of Man (IoM) interconnector, owned and operated by the Manx Utilities. A section of the interconnector runs just within and broadly parallel to the north boundary of the local other sea users study area, 830 m to the north of the proposed development.

### **Radar Early Warning Systems**

- 3.12.21. The REWS located within the REWS study area are shown in Figure 9.7 of [\[APP-027\]](#) together with the platforms that the REWS protect. The technical information and modelling techniques and results informing the assessments are reported in ES Volume 4, Annex 9.1: REWS and microwave communication links technical report [\[APP-063\]](#).

### **Mitigation**

- 3.12.22. Mitigation measures to reduce the potential impacts on other sea users are summarised in table 9.13 of [\[APP-027\]](#). The primary measures included as part of the project design include the use of safety zones around infrastructure during the construction phase (in accordance with the Safety Zone Statement) [\[APP-106\]](#). Tertiary measures include the use of Notice to Mariners, site marking and marine

charting, an Aids to Navigation Management Plan and an offshore Construction Method Statement, both secured within the Deemed Marine Licences (DMLs) with the draft Development Consent Order (DCO).

### **Assessment of Effects**

- 3.12.23. Section 9.9 of [\[APP-027\]](#) sets out the potential effects on other sea users receptors caused by each identified impact, summarised as follows:
- Displacement of recreational activities (all phases): minor adverse effects (not significant in EIA terms)
  - Reduction or restriction of other offshore energy activities (all phases): minor adverse effects (not significant in EIA terms)
  - Interference with the performance of REWS located on oil and gas platforms (all phases): minor adverse effects (not significant in EIA terms)
- 3.12.24. Section 11.9 of the assessment of aviation including helicopter operations during construction [\[APP-015\]](#) explains how the OWF infrastructure has the potential to create an obstruction to aviation activities of helicopters operating in support of the offshore hydrocarbon industry. It is supported by a Helicopter Access Report (HAR) [\[APP-045\]](#) which assesses installations within a 9 nm range, and identified a potential impact on:
- Millom West platform, operated by Harbour Energy, located 1.6 nm from the array area
  - Millom East PLEM and three subsea WHPS, operated by Harbour Energy, located 2.1 nm from the array area
  - Q1-3 wellheads, operated by Chrysaor Resources (Irish Sea) Ltd. (Harbour Energy), located 2.1 nm from the array area (these are located close to the Millom PLEM, so the same effects apply).
- 3.12.25. The HAR concluded that helicopter access could be restricted in certain meteorological and flight conditions, but that it understood that flights to non-production installations typically occur during daylight and predominately under visual meteorological conditions (VMC). It noted that emergency flights would still be possible by search and rescue (SAR) helicopters on behalf of the MCA, therefore any reduction in helicopter access would be a logistical impact on the installation operator rather than a safety impact.
- 3.12.26. Both the magnitude of the impact and the sensitivity of the receptor are deemed to be low, resulting in an effect of minor significance (not significant in EIA terms) both during construction and operation. There is no potential for effects during the decommissioning phase as they are planned to be decommissioned by 2032.

### **Cumulative Effects Assessment**

- 3.12.27. Section 9.11 of [\[APP-027\]](#) considers the cumulative effects assessment, with tables 9.17 to 9.20 summarising each scenario. For each of the listed other sea users receptors the cumulative effects are assessed for all phases as minor adverse which is not significant in EIA terms.

### **Transboundary impacts**

- 3.12.28. No potential transboundary impacts were identified.

## ISSUES CONSIDERED DURING THE EXAMINATION

3.12.29. Issues considered further during the Examination relating to other offshore infrastructure and sea users related primarily to two matters: access to existing oil and gas infrastructure, and wake effects on existing OWFs. There were a number of sub-issues related to these matters:

- Oil and gas infrastructure: Access to Millom field (Harbour Energy)
- Existing offshore wind farms and wake effects (Ørsted IPs):
  - Interpretation of policy and need for an assessment
  - Crown Estate round 4 leasing criteria
  - Awel y Môr and other precedents
  - The Ørsted IPs assessment
  - Mooir Vannin offshore wind farm
  - Net effects on greenhouse gas emissions
  - Potential additional measures

### **Oil and gas infrastructure: access to Millom Field (Harbour Energy)**

3.12.30. Millom West is located some 1.6nm from the order limits and includes a NUI platform. The gas pipelines are out of use and the Millom fields have not produced gas since 2020. Millom East is a non-producing installation (NPI) located some 2.07 nm from the Proposed Development. It comprises a PLEM and WHPS.

3.12.31. Harbour Energy noted that it was part of Chrysaor Resources (Irish Sea) Limited which is the owner of the Millom gas field. It raised concerns about a potentially significant detrimental impact upon decommissioning of the Millom field facilities, arising primarily from restrictions on helicopter aviation operations during decommissioning. Detrimental impacts may also arise affecting marine operations, platform communications and mutually exclusive simultaneous operations such as piling and diving operations. It noted a commitment to cooperating and collaborating with the Applicant to explore acceptable solutions to mitigate these issues [\[RR-012\]](#).

3.12.32. Harbour Energy's written representation (WR) [\[REP1-044\]](#) provided further detail on their concerns relating to the potential effects on their operations, and confirmed that the NUI at Millom West no longer supports helicopter access. Helicopters would however form an essential component of Millom East decommissioning. They would transport crews to and from the NPIs close to the PLEM and WHPS, as well as being required for emergency use. Appendix 1 of the document comprised an assessment of helicopter access.

3.12.33. Given that it was not anticipated that flights would be required during the decommissioning period at the Millom West platform, concerns relating to the Millom West platform in relation to helicopter access were considered by the Applicant to be closed (Table 2.3 of [\[REP2-005\]](#)). This was reflected in the statement of common ground (SoCG) with Harbour Energy submitted at Deadline 1. The Applicant also confirmed it had engaged productively with Harbour Energy since 2022 [\[REP1-031\]](#).

3.12.34. Regarding Millom East, the Applicant noted that in relation to the Sheringham and Dudgeon Extension project, a 1.26 nm distance was considered sufficient for helicopter access in daytime VMC from the Waveney platform, and Millom East is 2.07 nm from the Morgan array area. It maintained that the impact on operations to the Millom field would be logistic in nature and would not cause a reduction in safety (Table 2.3 [\[REP2-005\]](#)).



- 3.12.35. The Applicant also referred to its consideration of access for commercial air transport and SAR helicopters in the Helicopter Access Report (Appendix A [APP-045]), and clarified that the assessment of the loss of access for routine commercial flights in poor weather and at night had been shared with Harbour Energy. It explained that the analysis, applying meteorological data supplied by Harbour Energy and a methodology consistent with other NSIP projects, shows that the impact on day commercial air transport helicopter flights would be low. SAR helicopters would be able to access installations in the Millom Field under night and instrument meteorological conditions (IMC) so safety would not be affected (Table 2.3 [REP2-005]).
- 3.12.36. The Applicant considered that Harbour Energy had not provided justification for the required take-off distances and welcomed sight of the report which provides the evidence for this. It noted that the CAA is due to consult on changes to the Helicopter Offshore Operations regulations but that there was no timescale for this change, however it clarified that the assessment presented in [APP-045] was carried out assuming that this change would take place.
- 3.12.37. Overall, the Applicant considered that there would be adequate separation distance between the Morgan Array Area and the Harbour Energy assets. Consultation with stakeholders including helicopter operators had indicated that a distance of 1.5 nm is sufficient for a day VMC approach and take-off, noting that the Millom East assets are located 2.07 nm from the array area and that flights to support its decommissioning would be able to be scheduled within daylight hours only (table 2.3 [REP2-005]). The Applicant confirmed it had considered the loss of access in poor weather and at night within Annex 11.1 Appendix A of [APP-045] and the potential effect was assessed in the ES as minor adverse and not significant (Table 2.3 [REP2-005]).
- 3.12.38. The Applicant noted that as the Millom East subsea facilities are more than 1.9 nm from the Proposed Development, no restrictions in terms of wind direction apply to flights to NPI at Millom East under day VMC. It understood that commercial flights are conducted to helidecks adjacent to and inside wind farms where the distance to the closest wind turbine is less than 1.9 nm. As these flights are conducted under the same regulations as flights to an NPI in the Millom Field, the Applicant questioned why a considerably larger distance is required [REP2-005].
- 3.12.39. Harbour Energy accepted that it would not be appropriate to seek protections for marine access through protective provisions, however it believed that a coexistence and cooperation agreement addressing mutually exclusive simultaneous operations is necessary (ExQ1 INF 1.2 [REP3-031]). The Applicant did not consider it necessary to enter into such an agreement given that [APP-027] concludes no significant effects on Harbour Energy's infrastructure or operations [REP3-006].
- 3.12.40. In advance of ISH2 a joint statement was submitted by the Applicant in relation to marine access. This stated that the parties were engaged in constructive discussion to identify a mutually agreeable mechanism to address simultaneous operations and marine access [AS-011]. Harbour Energy did not attend ISH2, however the Applicant confirmed that discussions were ongoing regarding the appropriate mechanism to establish an agreed position [REP4-006].
- 3.12.41. At D4 the Applicant clarified that the order limits do not overlap with the marine corridors requested by Harbour Energy, so it would have no ability to adversely impact their activities or restrict freedom of access, but it could provide advance notice of its construction activities. Regarding helicopter access, it noted that the

Millom assets are to be decommissioned therefore coordination may not be required, so agreeing specific protocols post-consent would be preferable (Table 2.1 [\[REP4-007\]](#)).

3.12.42. Harbour Energy confirmed no agreement had been reached by D5, noting that material differences remained but that it was committed to finding solutions to allow co-existence (ExQ2 INF 2.2 [\[REP5-064\]](#)). The Applicant maintained it was inappropriate and unnecessary for matters relating to co-existence to be secured within the DCO and that existing mechanisms, such as the Marine Navigation Engagement Forum (MNEF), would be sufficient to address exclusive simultaneous operations and marine access as may be required [\[REP5-015\]](#).

3.12.43. Harbour Energy summarised its material differences [\[REP5-064a\]](#):

- **Aviation:** (i) loss of currently available flying opportunities and (ii) disruption and economic impact. Harbour Energy quoted differences between their calculations of potential loss of helicopter flight opportunities and those of the Applicant in [\[APP-045\]](#). Harbour Energy noted that, if restricted to daylight flying, its decommissioning programme could be extended by between 23 and 39 days (whereas the Applicant believed a 23-day delay to be excessively pessimistic), resulting in economic loss.
- **Marine access:** Harbour Energy confirmed that no mutually agreed mechanism as referred to in the joint statement [\[AS-011\]](#) had been reached and it sought for the DCO to include protective provisions.

3.12.44. Mitigation sought by Harbour Energy was as follows [\[REP5-064a\]](#):

- **Exclusion zone:** a 3 nm exclusion zone of the Millom East PLEM, which would still result in a 4% loss of flying opportunities.
- **Compensation:** as an alternative partial mitigation.
- **Phased installation:** a protective provision specifying leaving the installation of the towers and rotors of the wind turbine generators within 3nm of Millom East PLEM until the end of the installation programme, or the completion of Millom decommissioning. If acceptable to the Applicant Harbour Energy would be willing to bear risk and seek no further protections with respect to aviation or marine access. It stated that this represents a significant concession in the interests of reaching a pragmatic solution.

3.12.45. Harbour Energy were not present at ISH3 to provide an update, but provided post-hearing comments. Harbour Energy clarified that its activities relating to the decommissioning of Millom East subsea structures is expected to take place over a continuous period of about 120 days. It recognised that this is relatively short in the context of the life of the Proposed Development, and noted that it could be completed prior to operation of the OWF, so had proposed mitigation that it believed balanced the inconvenience experienced by each party [\[REP6-111\]](#).

3.12.46. Harbour Energy did not agree with the Applicant that the site selection and design would avoid or minimise disruption, economic loss and adverse effects on safety. It accepted that flights could safely be conducted within 2.07 nm. However, it maintained that the proximity of the turbines would introduce restrictions on when such flights could be made, and that this would introduce a minor adverse effect on safety for personnel on such an installation. Harbour Energy also made detailed comments in relation to the quoted precedents raised as part of the Hornsea Project 4 and Sheringham and Dudgeon Extension DCO examinations, setting out the differences from the situation relating to the Proposed Development [\[REP6-111\]](#).

- 3.12.47. Harbour Energy accepted that the issuing of Notices to Mariners through the MNEF is routinely undertaken but considered that it would allow for little advance planning and coordination of activities nor provide adequate safeguards to prevent disruption and economic loss should operations have to be suspended. Harbour Energy reiterated that protective provisions would ensure more proactive coordination of activities to the mutual benefit of both parties, as an appropriate and pragmatic mitigation. It stated that if the Applicant accepted a phased installation of the turbines (deferring those within 3nm of the Millom East PLEM until the end of the installation programme) it would seek no further protections other than normal custom and practice [\[REP6-111\]](#).
- 3.12.48. The Applicant clarified the methodology relating to meteorological data used in [\[APP-045\]](#) and presented flight data purchased from a third party, which is presented in Annex 3.3 to its response [\[REP6-007\]](#). It concluded that the data supports the Applicant's position that most flights are conducted under day VMC [\[REP6-006\]](#). The Applicant also submitted an additional meteorological analysis [\[REP6-008\]](#) which concluded that conditions where flying would not be possible would represent a very small percentage of overall flights. It also highlighted that the meteorological data shows that multi-day periods of poor weather are unusual in the east Irish Sea, and these events affect operations regardless of the presence of the Proposed Development.
- 3.12.49. The Applicant did not agree with the quantum of economic losses quoted by Harbour Energy, noting that no evidence had been provided to support the quoted figures, and considered compensation to be unnecessary given the minor logistical impact that may potentially and temporarily be experienced by Harbour Energy [\[REP6-006\]](#) and [\[REP6-014\]](#).
- 3.12.50. The Applicant also clarified that the final design and layout would be determined post-consent and that the sequence of installation would depend on a number of factors. Therefore, it would not be possible for it to commit to any specific construction sequence at this stage. It stated that doing so could have significant drawbacks on the project design, execution scheme and overall business case, and considered a restriction of this nature would be wholly unjustified and disproportionate to the level of impact. The Applicant noted that the scale of the works to construct the Proposed Development is significantly greater logistically and economically than the decommissioning of one non-producing oil and gas asset [\[REP6-006\]](#) and [\[REP6-014\]](#).
- 3.12.51. In summary, the Applicant considered it had suitably mitigated any adverse impact through the design of the wind farm, allowing a 2.07 nm distance from the Millom East assets. It noted that the distance far exceeds precedent from other offshore wind farm DCOs and exceeds the distance between NPIs and OWFs where there are ongoing activities in the Irish Sea. The Applicant considered it has complied with the relevant policy in NPS EN-3 and that no further mitigation is necessary [\[REP6-006\]](#) and [\[REP6-014\]](#).
- 3.12.52. In relation to marine access, the Applicant confirmed that a further commitment has been made to extend the MNEF through construction and five years into the operational phase, which would provide detailed information to Harbour Energy and a forum to discuss mutually exclusive activities [\[REP6-006\]](#) and [\[REP6-014\]](#).
- 3.12.53. Harbour Energy's request for an obstacle free radius of 1.9 nm around a helideck (Appendix 1 A1.2.6 [\[REP1-044\]](#)) and an obstacle free distance of 3 nm around the Millom East PLEM [\[REP5-054\]](#) was rejected by the Applicant as being excessive,

and not supported by current commercial air transport operations in and around wind farms [\[REP6-006\]](#) and [\[REP6-014\]](#).

- 3.12.54. Harbour Energy's closing statement clarified that the spatial overlap between the area required to complete decommissioning of the existing Millom field and the Proposed Development is small, and that no more than 2 OWF generators (out of up to 96) would be affected. It also noted that the temporal overlap would be relatively short but was subject to uncertainties. It reiterated that the reduced availability of aviation support would result in an extension in length of Millom decommissioning programme with increased costs, material disruption and economic loss which would not represent a 'minor logistical impact' as claimed by the Applicant [\[REP7-015\]](#).
- 3.12.55. Harbour Energy confirmed it had already accepted limitations including that all flights would be conducted in daylight. However it noted that no attempt had been made by the Applicant to accommodate economic impacts nor engaged in the mitigations which Harbour Energy had suggested, so included preferred wording for protective provisions for its Millom assets [\[REP7-014\]](#).
- 3.12.56. The Applicant noted that engagement with Harbour Energy had been challenging, with its responses being sporadic and not consistently focused on a particular concern, nor did it attend ISH3 despite it being an agenda item, so the opportunity for the ExA to explore these matters was lost. The key matters at the close of the Examination and the Applicant's final comments are summarised below (INF 3.3 Appendix B [\[REP7-004\]](#)):
- Any potential impacts on decommissioning operations at the Millom East subsea facilities would only occur if Harbour Energy's decommissioning program is delayed, and only if it takes place during or after turbines have been erected in a very specific part of array area. There is no certainty that disruption would occur.
  - If activities overlap, there could be restrictions on night time flights and flights IMC. The Applicant's assessment [\[APP-045\]](#) was validated by real time historical flight data [\[REP6-007\]](#) and [\[REP6-008\]](#).
  - Harbour Energy have acknowledged that they can undertake their operations in daytime only and its mitigation proposal (around installation scheduling) demonstrates that a residual minor effect is viable.
  - Project scheduling of a specific portion of the eastern extent of the array area cannot be committed to. More than one type of foundation could be utilised and would have different lead fabrication times. Sequencing would be optimised to reduce the overall construction timetable and related effects.
  - The energisation strategy would be determined post-consent and would be based on factors including the selection of turbine supplier, cable routing and foundation selection, and the number and location of OSPs. To commit to a construction sequence would have consequences disproportionate to any potential effects to Harbour Energy's short-term decommissioning operations.
  - The lack of safety concerns is evidenced by Harbour Energy acknowledging that flights can safely be conducted to an offshore installation within 2.07 nm of the nearest wind turbine rotor tip.
  - SAR helicopters would still be available for emergency events, because they do not have to comply with commercial air transport regulations but are operated in accordance with CAP 999.
  - Boundary refinement increasing the distance from 1.01 nm to 2.07 nm had already taken place, so reducing the potential effects through good design.
  - Residual concerns held by Harbour Energy are solely commercial in nature. Whilst it has agreed commercial terms on other OWF projects this case is not

comparable and there are factual differences between the precedent cases referred to.

- Imposition of a 3 nm buffer would be entirely disproportionate to any short term, tolerable effect that could potentially occur to Harbour Energy.
- Compensation would be unnecessary for only a possible effect that would only occur under very specific overlap of activity, which has no certainty of occurring, and has been acknowledged by Harbour Energy as tolerable.
- The likelihood and extent of conflict is therefore very limited. The impact any such commitment would have on the Applicant is entirely disproportionate to the effect on Harbour Energy, and protective provisions are therefore unnecessary.

3.12.57. For the reasons set out above, the Applicant does not consider that the potential interaction between the decommissioning of the Millom East wells and the construction of the Proposed Development is such that it requires either protective provisions or the payment of compensation. The interaction can and should be managed through the sharing of information through the MNEF [\[REP7-004\]](#).

3.12.58. The Applicant confirmed that it had not progressed a SoCG with Harbour Energy, stating that both parties had clearly stated their positions and that further engagement was ongoing [\[REP6-001\]](#).

***ExA considerations on oil and gas infrastructure: access to Millom field (Harbour Energy)***

3.12.59. Harbour Energy confirmed at D1 in both its written representation and the initial draft of the SoCG that Millom West NUI no longer supports helicopter access and it is not anticipated that flights would be required during the relatively short period that the NPIs would be working at the platform. Therefore, the ExA agrees with the Applicant that this matter is closed and any effects would be minor adverse and not require mitigation.

3.12.60. The ExA understands that it is effects to access to Millom East subsea structures (PLEM and WHPS) that remain as residual concerns. These were broken down into effects on marine access, simultaneous operations and limits on helicopter flights during decommissioning. The ExA acknowledges that early in the Examination a joint statement indicated that the parties were engaged in constructive discussion to identify a mutually agreeable mechanism (such as in a coexistence and cooperation agreement) to address mutually exclusive simultaneous operations and marine access. However, this has not progressed, and Harbour Energy continues to seek a coexistence and cooperation agreement for simultaneous operations.

3.12.61. The ExA also notes that the engagement of Harbour Energy was sporadic during the Examination, in particular its lack of attendance at the relevant ISHs. A substantial number of further comments were received in the latter stages of the Examination which resulted in the need to issue a Rule 17 letter to seek final comments on the matter.

3.12.62. In respect of marine access, the ExA notes that in response to ExQ1 INF 1.2 [\[REP3-031\]](#) Harbour Energy accepted that it would not be appropriate to seek protections for marine access through protective provisions. Given the marine access zones requested by Harbour Energy at pre-application consultation stage have been designed into the Application (increasing the distance from the Proposed Development to Millom East from 1.01 nm to 2.07 nm), the ExA is satisfied that potential effects on marine access to the Millom field have been adequately mitigated as part of the design process and that no further mitigation is required.

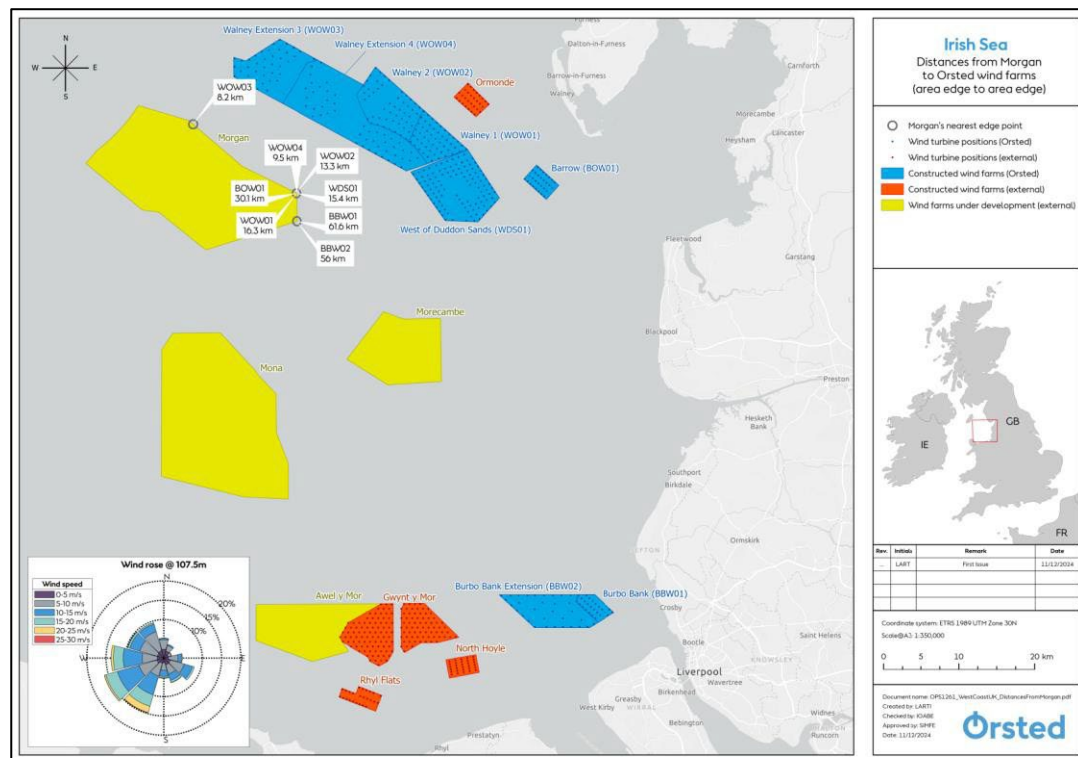


- 3.12.63. In relation to mutually exclusive simultaneous operations the ExA concurs with the Applicant's view that engagement via normal industry methods (particularly provision of notice to mariners) would be sufficient, and this would be enhanced by its commitment to extend the MNEF in order to provide detailed information to Harbour Energy and a forum to discuss such mutually exclusive activities. This does not require any additions to the recommended DCO.
- 3.12.64. It is clear that there are a number of outstanding concerns relating to helicopter access. The ExA acknowledges the concerns of Harbour Energy both in relation to safety and the potential extension of its decommissioning period (which has the potential to result in economic loss).
- 3.12.65. It is noted that there remain disputes over the methodology used to establish the effects on flights in VMC and IMC. The Applicant's submission of additional information relating to flight data and meteorological analysis at D6 support its original assessment as part of the ES and provide comfort to the ExA that the restrictions on helicopter flights would be limited.
- 3.12.66. The ExA acknowledges that the timescales for decommissioning of Millom East are uncertain. However, in the context of the overall life of the Proposed Development it is a short timeframe, and it is possible that the decommissioning could be completed prior to the construction of the wind turbine generators, even with the extended period resulting from the limits on helicopter flights to VMC only. This limits the overall effects and the ExA agrees with the ES that effects would be minor adverse and not significant. To delay construction of part of the array area, and include protective provisions as suggested by Harbour Energy within the recommended DCO, would be unreasonable and unnecessary given the very limited potential impacts relating to decommissioning delay.

#### **Existing offshore wind farms and wake effects (Ørsted IPs)**

- 3.12.67. The Ørsted IPs collectively comprise the operators of six existing OWFs within the Irish Sea. The distances from the proposed development are listed in Table 3 above and their locations shown in Figure 9.4 of [\[APP-027\]](#). Each operator submitted relevant representations (RRs) as follows:
- [RR-005](#) Barrow Offshore Wind Limited (Barrow)
  - [RR-007](#) Burbo Extension Ltd (Burbo Bank Extension)
  - [RR-023](#) Morecambe Wind Limited (West of Duddon Sands)
  - [RR-032](#) Ørsted Burbo (UK) Limited (Burbo Bank)
  - [RR-043](#) Walney Extension Limited (Walney Extension – Walney 3 and 4)
  - [RR-044](#) Walney (UK) Offshore Windfarms Limited (Walney 1 and 2)
- 3.12.68. In response to the ExA's first written questions ExQ1 INF 1.3 to 1.6 [\[PD-004\]](#) the Ørsted IPs provided a plan [\[REP3-054\]](#) to show the location of each of its OWFs, with the distances from the nearest point of the order limits of the proposed development. This is reproduced below in Figure 35.

**Figure 35: Distances to Ørsted IPs OWFs<sup>45</sup>**



- 3.12.69. Each of the RRs from Ørsted IPs raised concerns regarding the proximity of the Proposed Development to the existing OWFs and the potential to interfere with wind speed or direction, resulting in reductions in energy output. Overall, the Ørsted IPs sought proper assessment of the potential effects, and for such effects to be appropriately mitigated or compensated. In its WRs the Ørsted IPs requested that the Applicant should carry out an assessment of such effects and sought a calculation of net effects accounting for renewable energy generation losses arising from impacts to existing OWFs. It stressed that this is a matter of good design, and that the necessary data and modelling tools to undertake an assessment were available [REP1-060], [REP1-061], [REP1-062], [REP1-063], [REP1-064], [REP1-066].
- 3.12.70. The Applicant's initial response (sections 2.5, 2.7, 2.23, 2.32, 2.43, 2.44 [PD1-017]) set out that potential impacts had been identified and assessed in section 9.9.3 of ES Chapter 9 [APP-027] and were considered in the cumulative effects screening for each topic where appropriate. As set out in table 9.13 [APP-027] the Applicant noted a commitment to continued communication with other offshore energy operators to promote and maximise cooperation between parties, and to minimise interactions between conflicting activities. It highlighted the Crown Estate's round 4 leasing criteria including that projects could not be located within 7.5km of an existing OWF, confirming that the distance from the nearest OWF (Walney Extension) had been increased to 8.1km since pre-application consultation [PD1-017].
- 3.12.71. The Ørsted IPs continued to submit comments throughout the Examination, including making submissions at all issue specific hearings. A number of key themes related to wake effects emerged during the Examination, with the majority

<sup>45</sup> Source: Ørsted IPs Response to ExQ1 INF 1.4, Appendix 1 [REP3-054] – do not scale.

remaining in contention to the end. A draft SoCG was submitted at D2 [\[REP2-027\]](#) but did not progress any further given the fundamental disagreement between the parties. The key points of disagreement are summarised in the following sub-sections.

### **Interpretation of policy and need for an assessment**

- 3.12.72. The following paragraphs within section 2.8 of NPS EN-3 were frequently referred to by the parties throughout the Examination:

*2.8.197: Where a potential offshore wind farm is proposed close to existing operational offshore infrastructure, or has the potential to affect activities for which a licence has been issued by government, the applicant should undertake an assessment of the potential effects of the proposed development on such existing or permitted infrastructure or activities.*

*2.8.198: The assessment should be undertaken for all stages of the lifespan of the proposed wind farm in accordance with the appropriate policy and guidance for offshore wind farm EIAs*

*2.8.342: Where a proposed offshore wind farm potentially affects other offshore infrastructure or activity, a pragmatic approach should be employed by the Secretary of State*

*2.8.344: In such circumstances, the Secretary of State should expect the applicant to work with the impacted sector to minimise negative impacts and reduce risks to as low as reasonably practicable*

*2.8.345: As such, the Secretary of State should be satisfied that the site selection and site design of a proposed offshore wind farm and offshore transmission has been made with a view to avoiding or minimising disruption or economic loss or any adverse effect on safety to other offshore industries...*

*2.8.347: Where a proposed development is likely to affect the future viability or safety of an existing or approved/licensed offshore infrastructure or activity, the Secretary of State should give these adverse effects substantial weight in its decision-making*

*2.8.348: Providing proposed schemes have been carefully designed, and that the necessary consultation with relevant bodies and stakeholders has been undertaken at an early stage, mitigation measures may be possible to negate or reduce effects on other offshore infrastructure or operations to a level sufficient to enable the Secretary of State to grant consent*

- 3.12.73. In particular, the parties disagreed on the interpretation of paragraph 2.8.197, in respect of the definition of ‘close’ (to existing operational offshore infrastructure) and ‘activities for which a licence has been issued by the government’. Depending on the interpretation of these terms, the parties were in disagreement about the second part of the paragraph which requires the applicant to undertake an assessment of the potential effects on existing or permitted infrastructure.

- 3.12.74. The matter was initially discussed at ISH1 [\[EV2-003\]](#), and concerns from the Ørsted IPs were substantiated further in their WRs [\[REP1-060\]](#), [\[REP1-061\]](#), [\[REP1-062\]](#), [\[REP1-063\]](#), [\[REP1-064\]](#), [\[REP1-066\]](#). In summary, the Ørsted IPs considered all of their existing six OWFs to be ‘close’ to the proposed development, and that their

OWFs were ‘activities for which a licence has been issued by government’. They sought for the effects on their operators’ energy yields to be properly assessed by the Applicant as required by paragraph 2.8.197 of NPS EN-3.

- 3.12.75. In response to ISH1 action point 25 [\[REP1-016\]](#) and to the WRs [\[REP2-005\]](#), the Applicant considered that there was no legal or policy basis for requiring a wake effects assessment. It stated that even if such an assessment was required, the data needed for meaningful assessment was not available and there was no robust or recognised standardised approach for such an assessment. The Applicant considered that it could not provide a meaningful or reliable assessment on which any weight could safely be placed, for the reasons as set out in paragraph 1.2.6.2 of [\[REP1-016\]](#). The Applicant maintained it was unnecessary for the matter of potential energy loss of existing OWFs to be assessed and reported on within an ES. It noted that there is no published guidance to establish when an assessment would be required, or how it should be undertaken.
- 3.12.76. The Applicant disputed that the proposed development was ‘close’ to existing operational offshore infrastructure, with reference to the Crown Estate round 4 leasing criteria. It also argued that OWFs are not specifically referred to in NPS EN-3 in the relevant ‘other offshore infrastructure and activities’ sections of the document. The Applicant highlighted other paragraphs within NPS EN-1 and NPS EN-3, noting that they should be read as a whole, including the context of year 2050 net zero targets not being achievable without some level of residual impacts (paragraphs 3.1.1 and 3.1.2 [\[REP2-005\]](#)). The Applicant considered it had already taken the steps required by relevant NPS policy to minimise potential impacts during the pre-application phase, including adherence to the Crown Estate’s round 4 spacing criterion of at least 7.5km, and reduction of the array area following receipt of pre-application consultation responses as described in ES Chapter 4 [\[APP-011\]](#).
- 3.12.77. The ExA subsequently requested in ExQ1 INF 1.5 that the Applicant should undertake and submit an assessment of wake effects by D5, having regard to the provisions of section 2.8 of NPS EN-3 and the particular circumstances of the case. The Applicant continued to decline to produce such an assessment, quoting their interpretation of the EIA Regulations and paragraph 2.8.198 of NPS EN-3 which states that any assessment should be in accordance with appropriate policy and guidance for OWF EIAs, and maintaining that there is no such published guidance. It set out the key tests for the SoS to consider, and highlighted that a pragmatic approach should be taken when considering any impacts [\[REP3-006\]](#).
- 3.12.78. The Applicant went on to clarify that it would progress the final design post-consent, which may include refinement of number, spacing and positioning of wind turbines within the array area in accordance with the layout principles set out in Table 3.7 of the Project description chapter [\[APP-010\]](#), following the completion of detailed site investigation campaigns and selection of wind turbine model (ExQ1 INF 1.5 [\[REP3-006\]](#)).
- 3.12.79. The Ørsted IPs further argued their position that their developments constitute ‘existing operational infrastructure’ which is ‘close’ to the Proposed Development. They considered that proximity in the context of the relevant policy should be determined on the basis of the potential for the existing infrastructure to be impacted by the project, arguing that there is no other meaningful basis for making this determination in a planning context [\[REP3-070\]](#).
- 3.12.80. The Ørsted IPs’ closing statement summarises their position, in believing that the Applicant’s approach is misconceived and cannot be sustained, stating that it is

impossible to reconcile the narrow construction with paragraphs 2.8.261 and 2.8.347, which make it clear that the policy objective of co-existence requires a proper understanding of how any new proposal will impact on existing and consented projects [\[REP6-092\]](#). It maintains that the Applicant is required to undertake an assessment in accordance with paragraph 2.8.197 of NPS EN-3, and until it does so, the SoS will not be in a position to carry out its decision making in accordance with paragraphs 2.8.344 and 2.8.345 of NPS EN-3.

3.12.81. The Applicant maintained throughout the Examination that there is no legal or policy requirement to conduct a detailed wake loss assessment, and that the NPS policy tests have been met. In doing so, it noted that the NPS paragraphs being relied upon by the Ørsted IPs are the same as those set out in the 2011 NPS, (as raised at ISH2). It noted that if the effect of those provisions was to require any new OWF development to assess wake loss effects on existing OWFs, that would have become a well-established practice in the industry by this point. It highlighted that the policies have not been applied historically in such a manner, and there is no basis for a change in interpretation now despite being raised in previous DCO examinations (see Awel y Môr section below). It argued that the inconsistent approach of Ørsted to its own developments also demonstrates that this is not a settled policy position as suggested [\[REP6-014\]](#).

3.12.82. The Applicant also set out that if the intention of NPS EN-3 paragraph 2.8.197 was that it should apply to all existing offshore infrastructure, the word ‘close’ would not have been used to limit or contain circumstances when assessment is required. It considered that the NPS reference to ‘the activities that a licence has been issued’ relate to the installation and operation of the respective projects, and not a licence that regulates extraction of power from the wind. It noted that this paragraph must be read in the context of activities for which a licence has been issued by government as opposed to simply any activities in the Irish sea, and on that basis NPS EN-3 paragraph 2.8.197 is not engaged in this context [\[REP6-014\]](#).

3.12.83. The Applicant also highlighted throughout the Examination the lack of guidance which would allow a transparent and informed assessment to be undertaken as a basis for determining the significance of effects, which is needed for any consideration of policy compliance and the requirement for mitigation [\[REP6-014\]](#).

3.12.84. By the close of the Examination, no specific assessment of wake effects on other OWFs had been submitted by the Applicant, however the Ørsted IPs submitted their own assessment in relation to their OWFs in the Irish Sea as explained further from paragraph 3.12.113 below.

#### ***ExA considerations on interpretation of policy and need for an assessment***

3.12.85. The ExA’s considerations on the policy are summarised below, following the next sub-sections relating to the Crown Estate round 4 leasing criteria and precedents in Awel y Môr and other DCO examinations.

#### **Crown Estate round 4 leasing criteria**

3.12.86. At ISH1, the Applicant made further representation on the Crown Estate’s round 4 leasing process, noting its adherence to the required 7.5 km separation distance, which had been further exceeded at pre-application stage to 8.1 km (the separation to the nearest OWF at Walney Extension). It considered this to be a sufficient measure to reduce effects on other offshore infrastructure. The leasing process was also further explained in section 1.2.4 of its response to ISH1 hearing action point 25 [\[REP1-016\]](#).



- 3.12.87. The Ørsted IPs considered that the reliance by the Applicant on the Crown Estate's boundary separation requirements in its round 4 leasing does not justify the lack of a wake loss assessment, because the memorandum relied upon was not prepared for the purposes of providing guidance on this matter nor for regulating effects between sea users in the consenting process [\[REP1-060\]](#), [\[REP1-061\]](#), [\[REP1-062\]](#), [\[REP1-063\]](#), [\[REP1-064\]](#), [\[REP1-066\]](#).
- 3.12.88. In response to ExQ1 INF 1.3, the Applicant made further comments in respect of the Crown Estate's round 4 leasing requirements including the separation distance of 7.5 km [\[REP3-006\]](#), and provided a copy of the array layout yield study by Frazer-Nash Consultancy Limited ('the Frazer-Nash report') [\[REP3-009\]](#) as requested by the ExA. The Applicant maintained its stance that the Crown Estate took account of minimising impacts on other licenced activities in establishing the Round 4 separation distances.
- 3.12.89. The Ørsted IPs provided further comments relating to the Crown Estate's 7.5 km separation distance in their answer to part (vi) of ExQ1 INF 1.4, noting that the Round 4 leasing information memorandum dated September 2019 has no reference to wake effects, and that the Frazer-Nash report was published later so was not a factor at that time (October 2023). They stated that the Frazer-Nash report should not be interpreted as forming the basis for the quoted separation distance and cannot be relied upon as an assessment of likely effects in these specific circumstances [\[REP4-048\]](#).
- 3.12.90. The Ørsted IPs also made reference to a submission by the Crown Estate to the Outer Dowsing Offshore Wind (Generating Station) examination, and provided a copy as an appendix [\[REP4-051\]](#). In that submission, the Crown Estate confirmed that the buffer is not only related to wake effects but matters such as navigation and safety. It clarified that the 7.5 km stipulation was used for the purpose of processing project proposals in the tender only, for the purpose of de-risking the Round 4 tender by providing additional mitigation and assurance to participants through limiting proximity.
- 3.12.91. The Crown Estate also acknowledged that inter-farm wake effects can extend beyond the buffer distances and that other factors beyond distance, including prevailing wind direction and wind farm layout, may also be relevant. It went on to state that the location of a wind farm within the leased area is a matter for the developers to decide and design for. It also confirmed that the Frazer-Nash report has no direct link to the Round 4 leasing buffer zones, that the report summarises modelling applied to generic or hypothetical wind farms, and that it does not replace the need for project-specific analysis [\[REP4-051\]](#).
- 3.12.92. The Ørsted IPs maintained their position that any requirements established during the Crown Estate's leasing process does not obviate the requirement for the effects of a development to be assessed in the consenting process; any generic boundaries established in that process could not have taken into consideration the specific circumstances and likely effects of the Project on the Ørsted IPs' developments (paragraph 3.7 [\[REP4-048\]](#)).
- 3.12.93. The Ørsted IPs' closing submissions [\[REP6-092\]](#) included at Appendix 1 a copy of the Crown Estate's Region 17 Irish Sea Site Characterisation Report (2019), one of the round 4 bidding documents. The Ørsted IPs believed the lines of argument presented by the Applicant were fundamentally undermined and contended that neither the leasing distances nor the Frazer-Nash report are an effective proxy for the requirement to undertake an appropriate individual assessment, with distance

being just one factor. As noted at ISH3, impacts on wind resource were flagged as a hard constraint at a number of the Ørsted IPs assets which could require significant receptor-level mitigation in the Characterisation Area Report. The Ørsted IPs considered that this further indicates that compliance with the Crown Estate's buffer distance was never intended to override the need for project specific mitigation.

- 3.12.94. The Applicant's closing statement also referred to the Crown Estate's Characterisation Report, quoting that the cumulative impact of OWF developments will need to be considered in the Irish Sea area as there may be concerns around wind resource and proximity to existing sites. It also set out the need for a 5 km buffer around existing offshore wind projects. The Applicant highlighted that this spacing was increased to 7.5 km following further consultation, and that this has been fully complied with [\[REP6-014\]](#), paragraph 6.1.1.3].

#### ***ExA considerations on Crown Estate round 4 leasing criteria***

- 3.12.95. The ExA's considerations on this sub-topic are summarised following the next subsection.

#### ***Awel y Môr and other precedents***

- 3.12.96. The Awel y Môr OWF was consented in September 2023 (PINS [project page](#)). The site is located some 10.5km from the north Wales coastline, to the north west of an existing OWF at Rhyl Flats 5.1km away. The operators of Rhyl Flats made representations during that examination regarding wake loss effects, stating that the Awel y Môr OWF would result in a loss of up to 2% of its energy generation.
- 3.12.97. The interpretation of the relevant paragraphs of the 2011 NPS EN-3, and whether an assessment of wake effects was required, were also a matter of dispute between the applicant and IP in that case. The ExA agreed with the IP in relation to the interpretation of NPS EN-3 (2011) paragraph 2.6.179 in relation to the existing OWF falling within the definition of existing operational infrastructure, and that an assessment should have been undertaken by the Applicant. With reference to paragraph 2.6.185 of NPS EN-3 (2011) the ExA did not consider that the 2% effect would affect the future viability of Rhyl Flats. When balancing the 2% figure against the energy benefits of the Proposed Development it gave moderate weight against the scheme.
- 3.12.98. A requirement was included within the recommended DCO, which differed from that submitted by the IP. The ExA acknowledged that it was the first time such a requirement would be imposed on a DCO, and that it was likely such circumstances may become more common with the increase in offshore wind development so is important to fully understand the economic effects on existing OWFs (paragraph 5.14.85 [recommendation report](#)). It went on to say the ExA was aware that the inclusion of the proposed requirement may be seen as creating a precedent but considered that the inclusion of a wake effect assessment would ensure that the final detailed design of the Proposed Development had fully sought to minimise or negate the effects of the proposal on Rhyl Flats.
- 3.12.99. The [decision letter](#) at paragraph 4.178 notes that the SoS agreed with the ExA's view that a wake effect assessment should be carried out to ensure identified effects on Rhyl Flats OWF would be mitigated and minimised. No further commentary on the matter was supplied by the SoS.
- 3.12.100. The increasing interest in and understanding of wake effects was discussed at ISH2, and it was noted that this was primarily related to the group of Round 4 OWFs

currently in examination. The increasing number of operational and consented OWFs was discussed, as was the unchanged wording of the relevant paragraphs quoted from NPS EN-3 since the publication of the 2011 energy suite of NPS.

- 3.12.101. Precedent for an assessment being required by NPS EN-3 in relation to the Awel y Môr OWF, including the imposition of a requirement, was highlighted by the Ørsted IPs. They noted that the decision makers in that case were not deterred by a lack of prescriptive guidance on this matter, citing that the ExA indicated these assessments were likely to become more common with the increase in offshore wind development (ExQ1 INF 1.4 item vii [\[REP3-053\]](#)).
- 3.12.102. The Applicant considered the imposition of a requirement such as that included in the Awel y Môr OWF Order would be unnecessary and unreasonable and would not meet the policy tests as set out in NPS EN-1 paragraphs 4.1.16 to 18, creating further uncertainty in the offshore wind development industry and project risk. It noted that the same issue has been raised in a number of other Round 4 examinations (ExQ1 INF 1.6 [\[REP3-006\]](#)).
- 3.12.103. Whilst the Ørsted IPs were in agreement with the SoS position on the interpretation of NPS EN-3 in its decision on Awel y Môr OWF, it maintained (paragraph 3.6 [\[REP6-092\]](#)) that an assessment should be submitted by the Applicant prior to decision rather than leaving it to a post-consent requirement. In doing so, they noted that the scale of impact on some of Ørsted's assets would be more than double that expected at Rhyl Flats from the Awel y Môr OWF.
- 3.12.104. Other consented OWFs were also referred to by the parties in respect of wake loss considerations during past examinations. In relation to the Ørsted IPs' comments in relation to precedent and consideration during earlier OWF examinations (paragraph 3.12 [\[REP4-048\]](#)) and (ExQ2 INF 2.9 [\[REP5-059a\]](#)) the Applicant carried out a review of the Burbo Bank Extension, Walney Extension and Hornsea Project Two examination materials. It found no details of the conclusion of wake effect issues raised during those examinations, surmising that the matter would have been addressed via confidential voluntary agreements outside of the examination. More detailed comments were made by the Applicant regarding the effects between Hornsea Project One and Project Two, with reference to as-built data showing no buffer being apparent between the projects [\[REP5-008\]](#).
- 3.12.105. The Ørsted IPs submitted further information relating to the quoted other OWF examinations, including a copy of a submission from Hornsea Project One to Hornsea Project Two [\[REP5-057\]](#), [\[REP5-058\]](#) regarding the need for a buffer zone to reduce wake effects, and proposals for protective provisions or a cooperation agreement. The Applicant's response noted the lack of buffer zone in the final layout, the change in ownership, and that commercial agreement had been ultimately reached. The Applicant also argued that in view of voluntary private commercial agreements for Burbo Bank, Walney Extension and Hornsea Project Two, this demonstrates an inconsistent approach of Ørsted amongst its 16 OWF projects [\[REP6-005\]](#).
- 3.12.106. The Ørsted IPs (paragraph 2.13 [\[REP5-057\]](#)) also pointed out the matter of wake loss had been included in the recently published [Clean Power 2030 Action Plan](#) (page 84) (December 2024). A case study relating to wake effects notes that the UK government has recognised that while historically wake loss issues between developers have been resolved outside of the planning system, a precedent was set in the 2023 Awel y Môr decision through the imposition of a wake condition. The case study text sets out that the UK government understands the uncertainty that

this emerging issue has introduced. The Applicant disagreed that the piece in the Clean Power 2030 Action Plan supports the Ørsted IPs approach, and argued that wake loss as an emerging issue is a wider policy matter for resolution by the government (via DESNZ) rather than for individual DCO examinations [\[REP6-005\]](#), [\[REP6-012\]](#).

***ExA considerations on interpretation of policy and need for an assessment, Crown Estate round 4 leasing criteria and Awel y Môr and other precedents***

- 3.12.107. The Applicant declined to produce an assessment of wake effects on existing OWFs as requested by the ExA in ExQ1 INF 1.5 [\[PD-004\]](#) and throughout the Examination. Its reasons included its interpretation of paragraph 2.8.197 of NPS EN-3 and the lack of guidance, together with the range of uncertainties relating to the inputs of such an assessment. The ExA notes that the relevant paragraphs of NPS EN-3 are substantially unchanged since the previous 2011 version of the NPS, which was in place at the time of the determination of other OWF DCOs, including the 2023 decision on Awel y Môr. The ExA agrees that, since then, the matter of wake loss has gained traction in relation to consideration of recent DCO applications. This is with reference to the Awel y Môr consideration of policy in NPS EN-3 and its decision to include in that DCO a requirement for an assessment, as well as the Crown Estate's round 4 leasing criteria, and the proliferation of constructed, consented and proposed OWFs around the coast of the UK.
- 3.12.108. The Crown Estate's characterisation report for region 17, the Irish Sea, highlights the particularly high concentration of existing OWFs which are in relatively close proximity to each other and to the proposed Morgan, Mona and Morecambe OWFs currently under consideration. It is clear to the ExA that the matter of proximity to existing OWFs in terms of wake effects is just one issue amongst many other considerations and constraints. The 7.5 km distance stipulation not only relates to the Irish Sea but all round 4 OWFs. The Crown Estate's submissions to the Outer Dowsing examination and the academic literature provided by the Ørsted IPs make it clear to the ExA that wake effects can extend for much further than this distance. Whilst the methodology for assessment may be disputed, including inputs into the modelling and therefore the final figures relating to potential reduction in annual energy production (AEP), the Applicant does not dispute that wake effects will occur. Regardless, the ExA considers that adherence to the Crown Estate's round 4 leasing criteria is not the only relevant constraint, and loss of AEP is not the only outcome of wake effects.
- 3.12.109. The uncertainty regarding the treatment of wake effects is also recognised in the Clean Power Action Plan 2030. The ExA acknowledges the Applicant's argument that there is currently no guidance on which to assess wake effects and that this is a matter for the Department for Energy Security and Net Zero and the Crown Estate to take up as a wider strategic and policy matter. The ExA considers that notwithstanding the approach taken by the Awel y Môr ExA and SoS in that case, this is not a matter which can be settled via individual OWF examinations.
- 3.12.110. In terms of the interpretation of NPS EN-3, in particular paragraph 2.8.197, the ExA agrees with the Ørsted IPs and the conclusions in the ExA recommendation for Awel y Môr that this is indeed applicable to existing OWFs as existing operational offshore infrastructure and the policy specifies that an applicant should produce an assessment. The ExA considers that definition of 'close' cannot be purely based on the Crown Estate's round 4 leasing stipulation of 7.5 km separation. However the ExA agrees that there is a lack of clear policy and guidance and acknowledges the

Applicant's reasons for not producing a specific assessment for the Proposed Development.

3.12.111. However, in the absence of the Applicant's own specific assessment, the ExA considers that the wake impact assessment report commissioned by the Ørsted IPs ([\[REP4-049\]](#) supplemented by [\[REP5-059c\]](#)) is sufficient to inform the ExA and therefore the SoS on the potential effects (as further explained in the next sub-section). The report, discussed below, should be read together with the Applicant's subsequent critique of it [\[REP5-014\]](#) and the supporting additional information submitted by both parties.

3.12.112. In view of the above, the ExA considers that the imposition of a DCO requirement for the Applicant to submit a further wake effects assessment (similar to that imposed for Awel y Môr) would not meet the tests of necessity and reasonableness.

#### **The Ørsted IPs assessment**

3.12.113. In response to the disagreement which was established in the early part of the Examination regarding the definition of 'close' and the 7.5 km separation set by the Crown Estate leasing process, at D3 the Ørsted IPs provided a range of academic articles on wake loss to demonstrate that it occurs at wind farm separation distances much greater than 7.5 km [\[REP3-055\]](#), [\[REP3-057\]](#), [\[REP3-058\]](#), [\[REP3-059\]](#), [\[REP3-060\]](#), [\[REP3-061\]](#), [\[REP3-062\]](#), [\[REP3-063\]](#), [\[REP3-064\]](#), [\[REP3-065\]](#), [\[REP3-066\]](#), [\[REP3-067\]](#), [\[REP3-068\]](#), [\[REP3-069\]](#).

3.12.114. The Ørsted IPs also considered that a lack of guidance of carrying out wake assessments should not prevent a robust assessment from being undertaken, and such effects cannot simply be ignored. They noted that NPS EN-3 directs applicants to work with the relevant sector with an aim of resolving issues, and claimed lack of engagement from the Applicant on the matter. They also noted that the decision makers in the Awel y Môr OWF case were not deterred by a lack of prescriptive guidance on wake loss [\[REP3-053\]](#).

3.12.115. The Ørsted IPs in their response to ExQ1 INF 1.4 noted that they had commissioned their own modelling to demonstrate losses in AEP of up to 3.5% on a project-alone basis and by up to 5.3% cumulatively (including the proposed Mona OWF and Morecambe OWF) [\[REP3-053\]](#). The results were discussed at ISH2, which the Applicant had already had sight of given the same report was submitted as part of the Mona OWF examination. The Ørsted IPs subsequently submitted a 'wake impact assessment' report it had commissioned from the consultants Wood Thilsted Partners Ltd [\[REP4-049\]](#) (the Wood Thilsted report).

3.12.116. The conclusions set out in section 6 of the Wood Thilsted report relate to a range of selected scenarios compared with a baseline scenario, with the results of the additional wake effects at all of the Ørsted IPs assets displayed in Table 5-4 reproduced in Table 4 below. The exercise was carried out for all three OWFs proposals in the Irish Sea, including Mona OWF and Morecambe OWF (and the consented Awel y Môr), with an identical report submitted to each examination.



**Table 4: Summary of the results of the Wood Thilsted wake impact assessment report (the main scenarios normalised to the baseline)<sup>46</sup>**

| Scenario                                                  | Additional wake loss on each wind farm (%) |          |          |                    |                    |                      |            |                      |                                                           |
|-----------------------------------------------------------|--------------------------------------------|----------|----------|--------------------|--------------------|----------------------|------------|----------------------|-----------------------------------------------------------|
|                                                           | Barrow                                     | Walney 1 | Walney 2 | Walney Extension 3 | Walney Extension 4 | West of Duddon Sands | Burbo Bank | Burbo Bank Extension | Total additional wake loss on all Ørsted Irish Sea assets |
| Baseline                                                  | 0                                          | 0        | 0        | 0                  | 0                  | 0                    | 0          | 0                    | 0                                                         |
| Scenario 1 – Addition of Mona OWF                         | -1.55%                                     | -1.67%   | -1.22%   | -0.83%             | -1.58%             | -1.57%               | -0.96%     | -1.22%               | -1.38%                                                    |
| Scenario 2 – Addition of Morgan OWF                       | -0.49%                                     | -1.44%   | -2.09%   | -3.39%             | -3.09%             | -1.29%               | -0.23%     | -0.16%               | -1.64%                                                    |
| Scenario 3 – Addition of Morecambe OWF                    | -1.37%                                     | -0.53%   | -0.32%   | -0.40%             | -0.56%             | -1.01%               | -0.46%     | -0.45%               | -0.68%                                                    |
| Scenario 4 – Cumulative Addition of MoMoMo                | -3.13%                                     | -3.64%   | -3.64%   | -4.22%             | -5.16%             | -3.86%               | -1.63%     | -1.83%               | -3.63%                                                    |
| Scenario 5 – Cumulative Addition of MoMoMo and Avel y Môr | -3.40%                                     | -3.70%   | -3.68%   | -4.27%             | -5.30%             | -3.97%               | -2.15%     | -2.43%               | -3.80%                                                    |

- 3.12.117. The results indicated that the Proposed Development is predicted to have the largest impact on the total additional wake loss of the Ørsted assets, particularly on the Walney 2 and Walney Extension sites. Due to the south-westerly prevailing wind direction, it would have less impact on the other sites in this northern cluster of Ørsted OWFs.
- 3.12.118. The Wood Thilsted conclusions (paragraph 5 [REP4-049]) noted that the financial and technical consequences of additional wake losses could be considerable, but these were not quantified in the report. The consequences were noted to be subject to specific criteria on each wind farm site, including capacity factor, age of the wind farm, turbine type and size, and the agreed electricity sale price. The report also notes that increased turbulence levels due to the added wake may increase the fatigue or structural loading as well as cause additional downtime for the turbines. Sensitivity scenarios were undertaken, based on an assumption of turbines at a size of 276m rotor diameter (22.6 MW) wind turbines. The results of the sensitivity test shown in table 5-2 of the report suggested that additional wake losses would typically be reduced with larger turbines (the rotor diameter for the turbine generators proposed in the MDS for the Application would be between 250 m to 320 m).
- 3.12.119. The Applicant noted that the boundary used in the Wood Thilsted report was the Preliminary Environmental Information Report (PEIR) boundary which was larger than the array area submitted with the application and sought for the numbers to be updated. It noted the lack of standardised approach to assessing wake effects, no baseline consideration of effects of Ørsted projects on each other, and that Mooir Vannin OWF was not included, despite being the parent company and effects are likely to be similar to those claimed for Morgan. It also put that the study is not

<sup>46</sup> Source: Ørsted Wood Thilstead 'Wake Impact Assessment Report, Irish Sea Cluster', Rev 1-1, Table 5-4 [REP4-049]

independent but commissioned by Ørsted. Whilst it did not agree with the methodology or the need for an assessment, it confirmed that a GHG assessment would be submitted based on the figures presented [REP4-004] and [REP4-006].

- 3.12.120. In response to ExQ2 INF 2.5 [REP5-059a], the Ørsted IPs noted that the expected energy loss in kWh was commercially sensitive information, but provided a ballpark estimate of potential energy loss (based on OFGEM historic energy data) as shown in Tables 5 and 6 below, noting that the remaining lifetime is not a defined value.

**Table 5: Indicative annual energy losses – Morgan only<sup>47</sup>**

| <b>Morgan Only</b>   | Installed capacity (MW) | Actual capacity factor | Average AEP (MWh) | Wake Loss Percentage (%) | Indicative annual quantified energy loss (MWh) |
|----------------------|-------------------------|------------------------|-------------------|--------------------------|------------------------------------------------|
| Barrow               | 90                      | 34%                    | 271,958           | -0.45%                   | -1,224                                         |
| Walney 1             | 183.6                   | 39%                    | 626,410           | -1.58%                   | -9,897                                         |
| Walney 2             | 183.6                   | 44%                    | 708,959           | -2.18%                   | -15,455                                        |
| Walney Extension 3   | 320                     | 45%                    | 1,298,967         | -3.35%                   | -43,515                                        |
| Walney Extension 4   | 329                     | 45%                    | 1,298,967         | -3.22%                   | -41,827                                        |
| West of Duddon Sands | 388.8                   | 43%                    | 1,476,949         | -1.28%                   | -18,905                                        |
| Burbo Bank           | 90                      | 32%                    | 251,954           | -0.25%                   | -630                                           |
| Burbo Bank Extension | 256                     | 40%                    | 896,197           | -0.20%                   | -1,792                                         |
|                      |                         |                        |                   | <b>Total</b>             | <b>-133,246</b>                                |

**Table 6: Indicative annual energy losses – Cumulative<sup>48</sup>**

| <b>Cumulative</b>    | Installed capacity (MW) | Actual capacity factor | Average AEP (MWh) | Wake Loss Percentage (%) | Indicative annual quantified energy loss (MWh) |
|----------------------|-------------------------|------------------------|-------------------|--------------------------|------------------------------------------------|
| Barrow               | 90                      | 34%                    | 271,958           | -3.09%                   | -8,404                                         |
| Walney 1             | 183.6                   | 39%                    | 626,410           | -3.78%                   | -23,678                                        |
| Walney 2             | 183.6                   | 44%                    | 708,959           | -3.69%                   | -26,161                                        |
| Walney Extension 3   | 320                     | 45%                    | 1,298,967         | -4.13%                   | -53,647                                        |
| Walney Extension 4   | 329                     | 45%                    | 1,298,967         | -5.21%                   | -67,676                                        |
| West of Duddon Sands | 388.8                   | 43%                    | 1,476,949         | -3.86%                   | -57,010                                        |
| Burbo Bank           | 90                      | 32%                    | 251,954           | -1.63%                   | -4,107                                         |
| Burbo Bank Extension | 256                     | 40%                    | 896,197           | -1.84%                   | -16,490                                        |
|                      |                         |                        |                   | <b>Total</b>             | <b>-257,173</b>                                |

- 3.12.121. An updated version of the Wood Thilsted report [REP5-059c] was submitted by the Ørsted IPs in response to the Applicant's critique. This included an update to the figures resulting from the change to the PEIR boundary. The revised table 5-4 from [REP5-059c] shows a summary of the updated results, as reproduced in Table 7 below.

<sup>47</sup> Source: Ørsted IPs in response to ExQ2 INF 2.5 [REP5-059a]

<sup>48</sup> Source: Ørsted IPs in response to ExQ2 INF 2.5 [REP5-059a]

**Table 7: Summary of the results of the Wood Thilsted wake impact assessment report (the main scenarios normalised to the baseline)<sup>49</sup>**

| Scenario                                                  | Additional wake loss on each wind farm (%) |          |          |                    |                    |                      |            |                      |                                                           |
|-----------------------------------------------------------|--------------------------------------------|----------|----------|--------------------|--------------------|----------------------|------------|----------------------|-----------------------------------------------------------|
|                                                           | Barrow                                     | Walney 1 | Walney 2 | Walney Extension 3 | Walney Extension 4 | West of Duddon Sands | Burbo Bank | Burbo Bank Extension | Total additional wake loss on all Ørsted Irish Sea assets |
| Baseline                                                  | 0                                          | 0        | 0        | 0                  | 0                  | 0                    | 0          | 0                    | 0                                                         |
| Scenario 1 – Addition of Mona OWF                         | -1.55%                                     | -1.67%   | -1.22%   | -0.83%             | -1.58%             | -1.57%               | -0.96%     | -1.22%               | -1.38%                                                    |
| Scenario 2 – Addition of Morgan OWF                       | -0.45%                                     | -1.58%   | -2.18%   | -3.35%             | -3.22%             | -1.28%               | -0.25%     | -0.20%               | -1.68%                                                    |
| Scenario 3 – Addition of Morecambe OWF                    | -1.37%                                     | -0.53%   | -0.32%   | -0.40%             | -0.56%             | -1.01%               | -0.46%     | -0.45%               | -0.68%                                                    |
| Scenario 4 – Cumulative Addition of MoMoMo                | -3.09%                                     | -3.78%   | -3.69%   | -4.13%             | -5.21%             | -3.86%               | -1.63%     | -1.84%               | -3.65%                                                    |
| Scenario 5 – Cumulative Addition of MoMoMo and Avel y Môr | -3.36%                                     | -3.84%   | -3.73%   | -4.16%             | -5.34%             | -3.97%               | -2.16%     | -2.45%               | -3.82%                                                    |

- 3.12.122. This illustrated that the change in boundary has resulted in predicted effects worsening by a very small degree. This is due to Wood Thilsted electing not to place turbines in the northeastern part of the original lease area, hence there are only limited differences in the assumed layout between the PEIR boundary and the DCO boundary. The Ørsted IPs noted that this is an example of Wood Thilsted electing to take a conservative approach to assessing effects of the project (paragraph 2.18 [\[REP5-057\]](#)).
- 3.12.123. The Applicant continued to note inconsistencies with Ørsted's approach to considering wake effects and confirmed that the assessment remains not agreed. It also noted that the Ørsted IPs response to ExQ2 INF 2.5 stated that they have deliberately not disclosed the expected energy loss of kWh and have used installed capacities of each wind farm alongside the average capacity/ load factor for offshore wind, and confirmed that the Applicant had used OFGEM data for the purposes of calculating the net effects on GHG emissions, and had updated its GHG note accordingly [\[REP6-005\]](#).
- 3.12.124. Whilst no assessment similar to that provided by Wood Thilsted was submitted by the Applicant, a range of information was submitted to the Examination together with its critique of the Wood Thilsted report. In response to ExQ1 INF 1.4 [\[REP3-006\]](#), the Applicant quoted two relevant factors as being turbine spacing and the location of projects relative to each other noting that the wakes from different wind farms also overlap and interact, meaning it is difficult to identify the source and extent of the impact of one scheme on another (or others).
- 3.12.125. The Applicant noted that other factors such as atmospheric conditions mean that wake effects are a very complex phenomenon, being difficult to accurately quantify,

<sup>49</sup> Source: Ørsted Wood Thilstead 'Wake Impact Assessment Report, Irish Sea Cluster', Rev 1-2, Table 5-4 [\[REP5-059c\]](#)

but that the distance between wind turbines is the key factor for wake effects both internal and external. It stated that increasing the distance between OWFs and therefore decreasing wake effects can only be achieved by decreasing the site area of the proposed development, having a disproportionately greater effect on the new clean energy generation and associated carbon savings. It also pointed out that the proposed development would be located in a higher wind speed area compared with the Ørsted IPs projects, and the turbines will be materially higher, making them more efficient than the existing OWFs. Figure 1 of the Applicant's response (pages 131 to 133 [REP3-006]) provides a visual representation of the spatial mean wind speed distribution in the Irish Sea.

- 3.12.126. Part v) of ExQ1 INF 1.4 sought further information relating to indirect effects as well as the direct reduction of AEP, and the Ørsted IPs noted that increased wind turbulence could accelerate deterioration of turbines and foundations faster than expected, thus reducing the operational duration. They also stated that they may decide to continue to operate the developments beyond their initial 24-year period, and the impacts would be at a level likely to impact long-term decisions on the future of their assets. It confirmed that there are multiple softwares available in the industry. The steps involved in an assessment were outlined in response to part viii) of ExQ1 INF 1.4 [REP3-053]. It maintained throughout the Examination that the Applicant had failed to engage with them regarding production of an assessment and other matters, contrary to advice in NPS EN-3.

#### ***ExA considerations on the Ørsted IPs assessment***

- 3.12.127. The Ørsted IPs commissioned their own assessment to seek to demonstrate the levels of loss of AEP that could be experienced by their 6 existing OWFs in the Irish Sea. The ExA accepts that the Wood Thilsted report has some limitations and cannot provide a true picture of the levels of loss of AEP with the level of detail available for the proposed development at the current time. The report illustrates that wake loss would have effects on all the existing OWFs, with both the proposed development alone and cumulatively with Mona and Morecambe.
- 3.12.128. The Wood Thilsted report and other written and oral submissions by the Ørsted IPs have provided a great deal of information to the Examination on wake loss generally and the production of assessments. With the critique provided by the Applicant, this is sufficient for the ExA to make reasoned conclusions on the matter.
- 3.12.129. The ExA acknowledges that with a reduction in AEP there will be a resultant loss of export of renewable energy to the grid from the affected existing OWFs and thereby a level of economic loss. However, there is limited information before the ExA relating to the 'future viability' argument beyond the Ørsted IPs surmising that the effects might affect future decisions to extend the life of some of the existing older OWFs.
- 3.12.130. The ExA also acknowledges that commercial agreements may have been agreed outside of other previous OWF examinations, but these are confidential matters not before the ExA. Therefore, the ExA is unable to make conclusions on the future viability point raised by the Ørsted IPs. In any event, the ExA considers that this is a commercial matter and not one that should be included in the DCO, for the reasons above and for the further reasons as explained in the following sections.

#### **Moor Vannin Offshore Wind Farm**

- 3.12.131. The Applicant highlighted that Moor Vannin OWF was not included in the Wood Thilsted report, despite Ørsted being the parent company and effects likely to be

similar to those claimed for Morgan [\[REP4-004\]](#). The ExA asked ExQ2 INF 2.9 following the Applicant's comments that Ørsted were being inconsistent in their approach to their existing OWFs, and their forthcoming project submission for Mooir Vannin OWF to the IoM government.

- 3.12.132. Mooir Vannin OWF Limited responded that it had undertaken a wake loss assessment regarding effects from its proposed OWF in IoM waters on its existing OWFs in the Irish Sea. It stated that whether it will be submitted as part of that application will be determined by the status of commercial discussions, but that its impact is not relevant to the Morgan Examination which should be determined on its own merits and informed by its own impact assessment to include all Irish Sea OWFs including Mooir Vannin. It highlighted that the Applicant would have been aware of its project for Mooir Vannin for some time, since it was awarded to Ørsted in 2015, and that if a requirement were imposed this should be applied to all Irish Sea OWFs including Mooir Vannin [\[REP5-077\]](#).
- 3.12.133. In response [\[REP6-004\]](#), the Applicant stated that Mooir Vannin OWF Limited is incorrect regarding the necessity for an impact assessment which should have included all Irish Sea OWFs, and that Mooir Vannin is a Tier 2 project, neither existing or permitted. The Applicant also wished to highlight to the ExA the inconsistency in the manner that Ørsted is dealing with wake loss. The Applicant also highlighted that Mooir Vannin OWF Limited's consideration of wake loss was contradictory in confirming that it is a commercial and not a planning matter.
- 3.12.134. Mooir Vannin OWF Limited in its closing statement [\[REP6-090\]](#) clarified that based on its internal analysis, it anticipates that the Proposed Development would result in wake loss for Mooir Vannin OWF, and that this is a transboundary impact which should have been assessed by the Applicant. The ExA questioned the Applicant on this statement in its Rule 17 letter (INF 3.1 [\[PD-012\]](#)).
- 3.12.135. In response, the Applicant [\[REP7-004\]](#) noted the lack of evidence for Mooir Vannin OWF Limited's claim that this should be assessed as a transboundary EIA matter, noting that it is not aware of any legislation or policy that requires wake loss to be considered, and repeating the legal argument it had submitted in respect of transboundary matters in its response to ExQ1 GEN 1.7 [\[REP3-006\]](#) which, in summary, points out that the IoM is not an EEA State and therefore Regulation 32 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 does not apply.
- 3.12.136. The Applicant referred to its previous submissions [\[REP1-016\]](#), [\[REP2-005\]](#), [\[REP3-006\]](#), [\[REP4-004\]](#), [\[REP4-006\]](#), [\[REP4-007\]](#), [\[REP4-009\]](#), [\[REP5-008\]](#), [\[REP5-009\]](#) as to why an assessment of potential wake loss effects for operational projects is not possible, nor required by policy or guidance. It noted that the same principles apply to the proposed Mooir Vannin project with the added consideration that the Mooir Vannin application had not yet been made, and a decision would be later than that on Morgan and the other Irish Sea OWFs currently in examination. The Applicant considered that it could not be determined from the limited information in the public domain what scenario and turbine model what eventually be installed, so even if it was required, there is no basis for which a third party could undertake a wake assessment of Mooir Vannin OWF [\[REP7-004\]](#).
- 3.12.137. The Applicant added that if the IoM government required a wake loss effects assessment as part of its determination of the Mooir Vannin application, it would be Mooir Vannin OWF Limited that needs to undertake the assessment, rather than the



Applicant. Such assessment would be constrained in the same way for them as it is for the Applicant [\[REP7-004\]](#).

### ***ExA considerations on Mooir Vannin Offshore Wind Farm***

- 3.12.138. The ExA concur with the Applicant that Mooir Vannin OWF should not be included in an assessment of its wake effects as it is not existing or permitted operational offshore infrastructure, nor has a licence been issued by government as stated in NPS EN-3 paragraph 2.8.197.
- 3.12.139. Furthermore, at the close of the Examination the Marine Infrastructure Consent application had not yet been submitted to the IoM government so there is currently a limited level of information in the public domain that can be assessed. The position of the IoM when considering Transboundary matters is covered in [Chapter 2](#), section 2.8 of this Report.
- 3.12.140. Any inconsistency by Ørsted in approach to assessment of wake effects between its existing OWFs and Mooir Vannin is not a matter that has bearing on the ExA's considerations on this Proposed Development.

### **Net effects on greenhouse gas emissions**

- 3.12.141. Following the Ørsted IPs' response to ExQ1 INF 1.4 [\[REP3-053\]](#) and subsequent discussion at ISH2 regarding the potential EIA implications of wake effects on other OWFs, the Applicant provided a technical note [\[REP5-041\]](#) on the calculation of the net effects on GHG emissions following its review of the Wood Thilsted report. Its purposes of were:
- to determine the net effect on GHG emissions relating to the potential wake values put forward by Ørsted IPs in their wake impact assessment (Wood Thilsted report)
  - to conceptually explore the effect of implementing mitigation for wake effects on net GHG emissions
- 3.12.142. The Applicant stressed that its calculations have applied the estimated wake effects on energy yield put forward by the Ørsted IPs [\[REP4-049\]](#), but did not indicate its agreement with their wake assessment, or that there is a policy requirement to undertake an assessment. A scenario-based approach was applied in the note, which includes the baseline scenario 'a'. Scenario 'b' included the presence of the proposed development in accordance with its maximum design scenario (MDS) with energy production from the existing Ørsted OWFs, and accounting for potential reduction in energy production as per the Wood Thilsted calculations.
- 3.12.143. The note concludes that under scenario 'b' the Ørsted IPs projects result in a total loss of avoided emissions of 59,189 tCO<sub>2</sub>e (DESNZ long-run marginal)/ 579,917 tCO<sub>2</sub>e (DESNZ 'non-renewable fuels'), while the proposed development would result in 2,404,980 tCO<sub>2</sub>e (DESNZ long-run marginal)/ 53,411,680 tCO<sub>2</sub>e (DESNZ 'non-renewable fuels'). It confirms that this net change in avoided emissions does not alter the conclusions of the climate change assessment as presented in the ES (Volume 2, Chapter 12: Climate change [\[APP-016\]](#)).
- 3.12.144. The note also presents scenario 'c', which is the proposed development with indicative mitigation (an increase in separation distance resulting in a shrinking of the array area and corresponding increase in wind turbine layout density). This would result in a reduction in net lifetime avoided emissions overall; 40,716 tCO<sub>2</sub>e (DESNZ long-run marginal)/ 1,245,100 tCO<sub>2</sub>e (DESNZ 'non-renewable fuels'). This

is due to increased wind turbine generator density within the Morgan array area, leading to increased internal wake effects reducing the annual energy production of the proposed development. It states that the corresponding reduction in potential wake effects on the Ørsted IPs' OWFs associated with implementing such mitigation would be comparably small, aligning with the general principle that wake effects internal to a project are greater than effects on external projects at a distance [\[REP5-041\]](#).

- 3.12.145. The Ørsted IPs pointed out at ISH3 that the Applicant's GHG note ignored the proposed lifetime extension of the operation of some of its assets, and that the only mitigation scenario included in the note (removal of 50% of a generic array area) was unrealistic. The submission of the updated Wood Thilsted report at D5 [\[REP5-059c\]](#) also included updated figures that needed to be considered.
- 3.12.146. The Applicant subsequently submitted an update to the GHG note to include two alternate design scenarios 'c1 and c2', to reflect the updated Wood Thilsted report regarding the revised Order limits, and the correction to capacity values for Burbo Bank. The values are presented in table 4.5 of the document [\[REP6-063\]](#).
- 3.12.147. It did not consider the cumulative scenario but noted that anticipated similar principles would apply, whereby cumulative GHG benefit would significantly outweigh a small reduction in avoided emissions for the Ørsted IPs' projects. In doing so, it referred to IEMA's 'Assessing Greenhouse Gas Emissions and Evaluating their Significance' guidance regarding the lack of requirement to consider site specific cumulative effects on assessment of likely effects on climate change. The calculations were provided for two operating outcomes; the end of current lifetimes based on decommissioning dates provided by the Ørsted IPs to the Mona examination and potential lifetime extensions of 10 years, based on information provided by the Ørsted IPs in response to ISH3 action point 5. Overall, it stated that the updated figures do not change the overall conclusions of the note [\[REP6-063\]](#).
- 3.12.148. The updated assessment sought to demonstrate that under scenario 'c1' there would be a reduction in net lifetime emissions overall. When compared with 'Scenario b', scenario 'c1' results in 5,438 tCO<sub>2</sub>e (DESNZ long-run marginal) / 53,192 tCO<sub>2</sub>e (DESNZ 'non-renewable fuels') fewer avoided emissions (range presented using the long-run marginal and non-renewable fuels emissions factors). This is because the sensitivity study confirms that the closer positioning of the proposed development to the Ørsted IPs projects (aligning with the PEIR boundary) would likely result in increased potential wake loss effects, reducing the Ørsted IPs projects' AEP. The Applicant concluded that this therefore demonstrates that the refined boundary submitted with its DCO application scenario 'b' constitutes demonstrable mitigation on the potential wake loss effects experienced by the Ørsted IPs projects [\[REP6-063\]](#).
- 3.12.149. The Applicant concluded that the greatest benefit to national GHG emissions reduction, and UK renewable energy production, is achieved through the presence of the proposed development, despite any potential losses experienced by the Ørsted IPs OWFs, and that these conclusions have not been altered when accounting for 10 year lifetime extensions for Ørsted IPs projects (without considering commensurate potential lifetime extensions to the proposed development) [\[REP6-063\]](#).

### ***ExA considerations on net effects on greenhouse gas emissions***

- 3.12.150. An assessment of GHG already forms part of the ES [\[APP-016\]](#) and [\[APP-046\]](#). The ExA is content that the GHG technical clarification note [\[REP5-041\]](#) as updated at D6 [\[REP6-063\]](#) to take account of the updated Wood Thilsted report, is sufficient information in order for the ExA to reach reasoned conclusions regarding the effects on GHG emissions and reduction in net lifetime emissions. This is notwithstanding any limitations to its methodology and lack of assessment of the cumulative scenario.
- 3.12.151. The ExA considers the note to be sufficient in respect of paragraph 2.8.198 of NPS EN-3 which states that any assessment should be in accordance with appropriate policy and guidance for OWF EIAs, and an GHG emissions assessment has been appropriately carried out.
- 3.12.152. The updated note demonstrates that under all assessed scenarios the changes are marginal. Overall, the note demonstrates that the GHG benefit from the development of the Proposed Morgan OWF would substantially and significantly outweigh a small reduction in avoided emissions for the Ørsted IPs OWFs. The ExA is satisfied that the updated note has also factored in lifetime extensions of 10 years, which also do not change its overall conclusions that the effects are not significant in EIA terms.

#### **Potential additional measures**

- 3.12.153. Given that wake loss is not an issue considered within the submitted ES, the parties' reference to 'mitigation' measures is referred to by the ExA as 'additional measures'.
- 3.12.154. The Ørsted IPs considered that, with a lack of assessment by the Applicant of wake at the close of the Examination, the ExA would not be in a position to understand the degree of the potential effect and how it has been mitigated nor the extent to which a requirement could provide mitigation for any residual impacts. As such, the Ørsted IPs argued that the SoS would not be in a position to make a decision in accordance with the NPS EN-3. They noted that any requirement should be based on an understanding of the effect that it is seeking to mitigate or offset, and any residual effects post-mitigation. Any requirement cannot make up for a lack of assessment nor a failure to properly account for relevant information in the decision-making process (ExQ1 INF 1.6 [\[REP3-053\]](#)).
- 3.12.155. In response to ISH2 action point 13, the Ørsted IPs' provided suggestions of potential mitigation of any identified wake effects, including design and operational changes such as installing a smaller number of larger turbines, reducing capacity, increasing the separation distance between the Project and the Ørsted IPs' developments, wind sector management and wake steering [\[REP4-047\]](#), paragraph 2.17]. They also stated that a commercial side agreement could assist in ensuring adequate protection of their interests. It maintained that in order for the SoS to be in a position to make its decision in accordance with NPS EN-3, an assessment must first be provided by the Applicant.
- 3.12.156. The Applicant stated that the only mitigation is for the turbines to not to be built at all, that an increase in distance would have a disproportionately larger effect on clean energy generation from the proposed development, and that financial compensation for Ørsted is not a matter suitable for protective provisions nor a commercial side agreement [\[REP4-004\]](#).

- 3.12.157. The Ørsted IPs made reference to the mitigation hierarchy and CNP, noting that in light of the material impacts outlined in the Wood Thilsted report, paragraph 2.1.8 of NPS EN-3 would be engaged and that wake loss is an effect capable of being addressed through the mitigation hierarchy. It stated that the Applicant has failed to meaningfully cooperate regarding exploration of the potential for mitigation, and therefore it was not possible for the Applicant to demonstrate compliance with the mitigation hierarchy. The Ørsted IPs considered the loss of renewable energy yield at existing developments is a factor to be weighed in the planning balance against the benefits, in accordance with s104(7) of the Planning Act 2008. It sought for the matter to be given considerable weight in the planning balance (ExQ2 INF 2.6 [\[REP5-059a\]](#)).
- 3.12.158. In response to ExQ2 INF 2.6 the Applicant's position remained that wake effects are a commercial matter and not one to be considered through the NPS or the EIA regime, and as such it is not an environmental impact to which the mitigation hierarchy applies. However if the ExA or SoS consider it is a matter of policy, the Applicant suggested that wake effects should be given very limited weight, which would be considerably outweighed by the benefits of proposed development [\[REP5-015\]](#).
- 3.12.159. In response to ExQ2 2.8 the Applicant made comments on the range of potential mitigation measures but maintained that mitigation was unnecessary given the lack of policy requiring an assessment, and lack of guidance on how it might be undertaken. It also noted that an 'acceptable' level of residual effect is not defined to be able to determine what mitigation might be appropriate. The potential mitigation measures on which the Applicant commented on in its response [\[REP5-015\]](#) are noted below:
- *Changes to internal layout:* the overall downstream wake effect would remain broadly unchanged for a constant number of turbines installed within this area. There are a number of constraints on layout already for the purposes of navigational and commercial fisheries mitigation that would limit any ability to amend layouts for the purposes of wake effects.
  - *Increasing separation distance:* a substantial change in the array area and in a range of directions would be required to make any meaningful reduction in effect. The increased density of turbines would have significant effects on energy output due to increased internal wake effects.
  - *Wind sector management:* would cause a significant reduction in output and only a small relative benefit to Ørsted IPs in a similar manner to increasing distance.
  - *Wake steering:* yawing of turbines to deflect wakes – no evidence or even intention that such a system could be used to reduce wake impacts on neighbouring arrays located at a significant distance downstream.
  - *Arbitration:* paragraph 2.8.262 of EN-3 notes that the SoS has an overarching position on resolving this issue, and in the absence of policy or guidance, it would be unclear what achieving good mitigation would be. To specify arbitration as a mechanism to resolve the dispute would be unworkable and unenforceable.
- 3.12.160. The Ørsted IPs also responded to ExQ2 INF 2.8 with explanation of the different types of potential mitigation. In respect of arbitration, they noted that arbitration may be an appropriate route to addressing the issue only as a last resort following attempts to mitigate the impacts, if both parties agree for the outcome of the arbitration to be legally binding, and if the appropriate mitigation or compensation was directly linked to the outcomes of a wake assessment [\[REP5-059a\]](#).

- 3.12.161. At D6, the Applicant further disagreed with the Ørsted IPs' response regarding potential mitigation and arbitration. It highlighted that whilst there were voluntary private commercial agreements for Burbo Bank, Walney Extension and Hornsea Project Two, this is an inconsistent approach of Ørsted amongst its many OWF projects. Overall, the Applicant does not consider further mitigation applicable, suitable or capable of delivering the objectives of reducing net carbon emissions [\[REP6-005\]](#).
- 3.12.162. The closing statement from the Ørsted IPs noted that the Applicant had chosen not to put forward any realistic suggestions for dealing with or mitigating the wake effects identified and does not provide a genuine effort to engage on this issue. The Ørsted IPs also highlighted a risk that extensive years of generation could be lost entirely due to the economic impact, and unlike previous developers, the Applicant has not entered into any contractual arrangement [\[REP6-092\]](#).
- 3.12.163. The Ørsted IPs closing statement also noted that as the UK seabed becomes more crowded with new OWFs and different owners, and as the industry's understanding of the extent of wake effects matures, a clear need has emerged for mitigating or compensating wake effects. They sought for the establishment of a level playing field to enable the successful long-term coexistence of the many new OWF projects including consideration of lifetime extensions such that existing wind farms can continue to deliver green energy to the grid [\[REP6-092\]](#).

***ExA considerations on potential additional measures***

- 3.12.164. The ExA agrees with the Ørsted IPs that loss of AEP or energy yield is not the only effect that would arise to existing OWFs from the operation of the proposed development. Due to a reduction in AEP, there would be an inevitable economic loss, however this has not been quantified in the Examination. Some of the existing Ørsted IPs OWFs are nearing the end of their expected lifetimes and there is a possibility that wake loss arising from the operation of the proposed development would affect decisions to extend those lifetimes. However, this would be a commercial decision and not one which the ExA can make assumptions on. There are a number of other factors involved in such decisions, including environmental effects, and the ExA are not in a position to make a judgement on those.
- 3.12.165. Overall, the ExA has accepted that there would be wake loss effects, and that these would vary to each existing OWF in the Irish Sea. However, when considering the reduction in AEP alone, the effects would be limited to a small percentage in the region of that set out in the Wood Thilsted report. When compared to the generation of new renewable energy from the Proposed Development, such effects would be considerably outweighed.
- 3.12.166. A range of potential mitigation measures have been suggested by the Ørsted IPs some of which would be more reasonable and achievable than others. The ExA is aware that commercial agreements have been reached as part of other OWF proposals elsewhere, however those relate to different circumstances and in any case the relevant ExA and third parties are not privy to such agreements. Should a commercial agreement be reached outside of the Examination that is a matter for the parties. However, the ExA considers that the effects would be so small, and the GHG effects in particular have been found to be not significant in EIA terms, that such effects do not warrant mitigation to be secured in the DCO whether by requirement, protective provisions or any other method including arbitration.



- 3.12.167. The ExA accepts that a level of mitigation has already been designed in through the pre-application stage, by a reduction in the array area and increase in distance from the nearest existing OWF (Walney Extension). The adherence to the Crown Estate 7.5km separation distance stipulated in the leasing memorandum is therefore inconsequential, as it is exceeded in any case, and this distance is not purely based on avoiding wake loss but a range of other factors and constraints.

## CONCLUSIONS

- 3.12.168. For the following reasons the ExA considers that the Applicant has adequately responded to concerns from both Harbour Energy and the Orsted IPs in its submissions throughout the Examination in relation to potential effects on other offshore infrastructure and sea users.
- 3.12.169. The sporadic engagement of Harbour Energy unfortunately culminated in lengthy submissions at the end of the Examination. Notwithstanding this the ExA is satisfied that the Applicant has worked with Harbour Energy (including prior to submission of the Application) to minimise negative impacts and reduce risks to as low as reasonably practicable, in accordance with NPS EN-1 paragraphs 2.8.261 and 2.8.342. It has included appropriate mitigation within the Application through the increase in the separation distance between the Millom field assets and the array area, and the ExA is satisfied that no further mitigation is required in respect of marine access for Millom field decommissioning. In relation to mutually exclusive simultaneous operations, whilst the ExA understands that a coexistence and cooperation agreement may be concluded outside of the Examination, engagement via normal industry methods including through the Vessel Traffic Management Plan secured in the recommended DCO would be sufficient. This would be enhanced by the Applicant's commitment to extend the MNEF and no further mitigation is required to be secured within the recommended DCO.
- 3.12.170. Harbour Energy's concerns relating to helicopter access for decommissioning remained outstanding at the close of the Examination. The additional flight data and meteorological analysis supplied by the Applicant goes some way to providing additional comfort to the ExA that restrictions on and disruption to helicopter flights to Millom East would be limited. The potential disruption and economic loss claimed by Harbour Energy through the extension of its decommissioning period has not been adequately substantiated, albeit the ExA recognises that a number of other factors would affect this and that there are uncertainties relating to the Millom East decommissioning period. This is also considered in the ExA's conclusions relating to socio-economic effects in section 3.13 of this Report.
- 3.12.171. Taking account of the likely short-term overlap of construction of the Proposed Development with Millom Field decommissioning the ExA agrees with the Applicant that effects to Harbour Energy would be minor adverse overall and not significant. There would not be intolerable risks to safety and the ExA considers that additional mitigation in the form of protective provisions would be unreasonable and unnecessary.
- 3.12.172. The Ørsted IPs submitted frequent and lengthy representations to the Examination regarding the matter of wake loss. This was not a matter scoped into the ES. It is disappointing that the Applicant did not submit its own detailed assessment of wake effects on existing OWFs in the Irish Sea as requested by the ExA in ExQ1 INF 1.5 [\[PD-004\]](#). In terms of the interpretation of NPS EN-3, in particular paragraph 2.8.197, the ExA considers that this is applicable to existing OWFs as existing operational offshore infrastructure. The ExA notes that the matter of wake loss

assessment is now contained within the consultation draft of an updated NPS EN-3, however this was issued after the close of the Examination and therefore the parties have not had the opportunity to comment on it.

- 3.12.173. Therefore an assessment of potential wake effects is necessary, however the ExA recognises that there is currently a lack of policy and guidance on the production of such an assessment (as referred to in paragraph 2.8.198 of NPS EN-3) and acknowledges the range of uncertainties relating to the inputs and methodology. The lack of a detailed assessment by the Applicant on wake effects is contrary to paragraph 2.8.197 of NPS EN-3. Notwithstanding this, the ExA considers that the report commissioned by the Ørsted IPs, together with the Applicant's submissions including the GHG assessment, is sufficient information to inform the ExA and therefore the SoS on the potential effects on existing OWFs. Both parties have had adequate opportunity to comment on each other's submissions.
- 3.12.174. The ExA concludes that the Proposed Development would result in a loss of export of renewable energy to the grid from the affected existing OWFs, and thereby a level of economic loss to the Ørsted IPs. Nonetheless the effects would be very limited in the context of the substantial levels of renewable energy that would be generated by the Proposed Development. The Applicant's GHG assessment adequately demonstrates that it would greatly outweigh a small reduction in avoided emissions for the Ørsted IPs OWFs, including factoring in lifetime extensions.
- 3.12.175. The ExA is not persuaded by the arguments relating to the consequences of wake effects on commercial decisions about future viability that would be made by the Ørsted IPs. No clear evidence was provided that the predicted wake loss effects would seriously impact future repowering of existing OWFs. The ExA acknowledges that there are a range of different factors involved in decisions on whether to extend the life of an existing OWF, and such commercial matters are outwith the scope of the Examination.
- 3.12.176. The ExA is satisfied that NPS EN-1 section 4.7 and EN-3 paragraph 2.5.2 has been taken into account by the Applicant in relation to good design, where siting can help mitigate adverse impacts and in relation to seeking opportunities for co-existence with other marine uses.
- 3.12.177. Overall, in relation to issues raised by both Harbour Energy and the Ørsted IPs, the ExA recognises the importance of existing other offshore infrastructure but considers that a pragmatic approach could be employed by the SoS in accordance with paragraph 2.8.342 of NPS EN-3. The ExA is satisfied that appropriate mitigation has already been designed in through the pre-application stage, by a reduction in the array area and increase in distance from oil and gas infrastructure and the existing OWFs. Paragraph 2.8.345 of NPS EN-3 and policies NW-CO-1 NW-OG-1 of the NWMP are satisfied in respect of minimising disruption, economic loss and safety risk to other offshore industries. The ExA does not consider that any additional measures, including protective provisions, are reasonable or necessary.
- 3.12.178. The ExA attributes a little negative weight to this matter against the making of the Order.

### 3.13. OTHER CONSIDERATIONS

3.13.1. This section on addresses various environmental matters that were assessed in the Applicant's Environmental Statement (ES) but were either not included in the Examining Authority's (ExA's) initial assessment of principal issues or were uncontentious during the Examination, as follows:

- Historic environment
- Human health effects
- Seascape, landscape & visual effects
- Social and economic effects

#### HISTORIC ENVIRONMENT

3.13.2. This section considers the effects of the Proposed Development on the historic environment including both designated and non-designated heritage assets (NDHA). The historic environment was not a principal issue and was not considered at any issue specific hearings, but matters dealt with in writing included impact of the Proposed Development on marine archaeology, and the setting of terrestrial heritage assets. The assessment of seascape, landscape and visual effects is considered later in this section of the Report.

3.13.3. In its consideration of the topic the ExA has had regard to the Overarching National Policy Statements (NPS) EN-1 (section 5.9) and EN-3 (section 2.8). The SoS should give considerable importance and weight to the desirability of preserving all designated heritage assets. Any harmful impact on the significance of a designated heritage asset should be given significant weight when weighed against the public benefits of development.

3.13.4. The Infrastructure Planning (Decisions) Regulations 2010 (the Decisions Regulations) require the SoS to have regard to the desirability of preserving, amongst other things, the setting of a listed building. Other relevant legislation and policy are listed in [Appendix A](#) to this Report.

3.13.5. While not part of the legislative framework, the UNESCO Convention Concerning the Protection of the World Cultural and National Heritage 1972 makes provision for the World Heritage List, which is a list of cultural and/or natural heritage sites of outstanding universal value. World Heritage Sites (WHS) considered in this section are the English Lake District and the Frontiers of the Roman Empire: Hadrian's Wall.

3.13.6. Section 2.6.6 of the MPS is important and relevant to historic environment considerations, as are section 3.2 and policies NW-HER-1 and NW-SCP-1 of the North West Marine Plan (NWMP).

#### The Application: marine archaeology

3.13.7. ES Volume 2, Chapter 8: Marine archaeology and cultural heritage [\[APP-026\]](#) presents the baseline environment and the assessment of the potential impacts of the Proposed Development on marine archaeology and cultural heritage during the construction, operations and maintenance, and decommissioning phases. Chapter 8 is supported by ES Volume 4, Annex 8.1: Marine archaeology technical report [\[APP-061\]](#). The impacts of the Proposed Development on terrestrial heritage assets are addressed in ES Volume 4, Annex 8.2: Cultural heritage assessment [\[APP-062\]](#).

- 3.13.8. The documents provide information regarding the baseline desktop studies and fieldwork activities undertaken, any limitations in available data, and agreement on methodology reached through consultations or otherwise. The study area in respect of marine archaeology consists of the order limits with an additional 2km buffer, consistent with that set out in ES Volume 2, Chapter 1: Physical processes. The settings study area for the assessment of terrestrial heritage assets, comprises a 50km buffer as shown in Figure 1.1 of [\[APP-062\]](#) (including the Zone of Theoretical Visibility (ZTV)).
- 3.13.9. Within data from the UK Hydrographic Office (UKHO) there are 11 entries that relate to maritime wreck sites within the study area of which 6 are considered 'live'; and one that corresponds to a potential aircraft crash site (UKHO 5418/ NRHE 909495) which is considered 'live' by the UKHO due to discovery of aircraft wreckage reported by divers in 1991.
- 3.13.10. Although no material of anthropogenic origin has been identified within the geophysical data at the stated position of that potential aircraft crash site, a precautionary temporary Archaeological Exclusion Zone (AEZ) with a 100 m radius has been proposed around the coordinates of the UKHO record due to the potential value of this archaeological receptor [\[APP-026\]](#).
- 3.13.11. Geophysical data identified 51 anomalies of potential archaeological interest within the study area. Of these, five anomalies are considered to be of high potential interest, and a further five of medium potential for wreck or debris [\[APP-026\]](#).

#### **Mitigation: marine archaeology**

- 3.13.12. Mitigation proposed for marine archaeology impacts [\[APP-076\]](#) are the following, development of and adherence to:
- AEZs around locations identified as having high and medium archaeological potential secured within the DMLs in the draft DCO
  - development of, and adherence to, a Design Plan siting structures to avoid any AEZs secured within the DMLs in the draft DCO
  - development of, and adherence to, an Outline Offshore Written Scheme of Investigation (WSI) and a Protocol for Archaeological Discoveries secured within the DMLs in the draft DCO.

#### **Assessment of effects: marine archaeology**

- 3.13.13. Section 8.6 and Table 8.16 of [\[APP-026\]](#) describe the Maximum Design Scenarios (MDS) for potential impacts on marine archaeology, dependent on the type of potential impact from a mixture of different numbers and foundation types for WTGs and OSPs to be determined in final design post-consent.
- 3.13.14. The assessed impacts on marine archaeology include direct damage to archaeological receptors on the seabed or deeply buried, and sediment disturbance and deposition and altered sediment transport.
- 3.13.15. The Applicant noted that while marine archaeology and physical processes (sediment deposition) are linked receptors, inter-related effects have been fully taken into account in the marine archaeology assessment [\[APP-019\]](#).
- 3.13.16. The Applicant's conclusion is that after mitigation there would be no adverse residual effects to marine archaeology that are significant in EIA terms arising from

impacts of the Proposed Development during any of the phases alone or cumulatively with other projects [\[APP-026\]](#).

### **Issues considered during the examination: marine archaeology**

- 3.13.17. Historic England's written representation [\[REP1-046\]](#) sought improvements in the outline WSI regarding survey methodology and strengthening of security for timely pre-construction survey analysis to inform engineering design. Historic England disagreed with the Applicant's conclusion in the ES of no significant residual effects after mitigation, arguing that because the ES proposes WSI, survey, PAD and recording and use of AEZs as mitigation the assessment does not accurately reflect the residual risk of harm to archaeological assets.
- 3.13.18. In answer to the ExA's first written question (ExQ1) HE 1.6 [\[PD-004\]](#) the Applicant confirmed that the outline offshore Written Scheme of Investigation (WSI) sets out commitments to avoid as-yet unknown archaeological assets that may be identified during the lifetime of the Proposed Development, including during cable survey activities post-construction secured by the deemed marine licences (DMLs) within the draft DCO [\[REP3-036\]](#).
- 3.13.19. Historic England advised that the commitments made in the outline offshore WSI for Morgan Generation Assets should be co-ordinated with the equivalent produced for the Morgan and Morecambe Transmission Assets DCO application (the Transmission Assets) [\[REP4-045\]](#).
- 3.13.20. The outline offshore WSI was subsequently updated and resubmitted, incorporating a commitment to undertake action to optimise geoarchaeological analysis to be coordinated as far as possible with the Morecambe Offshore Wind Farm Generation Assets project (Morecambe OWF) and the Transmission Assets with the object of supporting production of a unifying palaeo-environmental ground model and to realise benefits of coordination between projects as referenced in NPS EN-3 [\[REP5-039\]](#).
- 3.13.21. At D5, Historic England confirmed satisfaction with the wording of commitment Co99 for: "...*subsequent method statements produced by the Retained Archaeologist and approved by the Statutory Archaeological Curator in advance of works commencing*" [\[REP5-065\]](#).
- 3.13.22. The final Statement of Common Ground (SoCG) with Historic England recorded all included matters as agreed, and that there are appropriate measures in the updated outline WSI to ensure that any impacts are avoided, reduced or offset [\[REP6-077\]](#).

### **ExA considerations on marine archaeology matters**

- 3.13.23. The ExA is satisfied that the ES provides a reasonable assessment of potential impacts upon the marine historic environment and provides adequate safeguards to ensure that known and unknown offshore heritage assets will be best avoided and, as such, the provisions of paragraphs 2.8.165-2.8.176 of EN-3 and policies NW-HER-1 and NW-SCP-1 of the NWMP have been met.
- 3.13.24. The ExA accepts the Applicant's assessment of no significant residual effects to marine archaeology ensuing from impacts of the Proposed Development alone or cumulatively with other projects. The ExA notes that minor beneficial effects of archaeological investigation and data sharing have been taken into account in Historic England's acceptance of appropriate mitigation measures proposed.



### **The Application: terrestrial heritage assets**

3.13.25. Due to the offshore location of the Proposed Development, the terrestrial heritage assets assessed by the Applicant are located on the IoM and in England. The methodology allowed for the inclusion and assessment of undesignated assets considered to be of equal significance to designated assets, however the initial screening exercise failed to identify any undesignated monuments which had a meaningful visual or historic relationship with the seascape which contributes substantively to their heritage significance. Accordingly, the only assets taken forward to assessment were designated assets. Impacts are considered from the standpoint of visual change only.

3.13.26. In the absence of a formal definition of the setting of a heritage asset on the IoM, the definition used for the assessment is the one defined in the National Planning Policy Framework (NPPF) and as previously been used with the approval of Manx National Heritage on other projects on the IoM:

*The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral (Annex 2 Glossary).*

### **Mitigation for impacts to cultural heritage**

3.13.27. Mitigation for impacts to cultural heritage are the painting of turbine nacelles, blades and towers light grey, and the operation of lighting to structures at lowest permissible levels for the visibility conditions, both secured as a condition of the draft DCO [\[APP-076\]](#).

### **Assessment of effects: terrestrial heritage assets**

3.13.28. The settings assessment considers only terrestrial designated historic assets and not NDHAs, reflecting the importance attached to their settings by statute and policy, and hence the greater likelihood of significant effects as a result of change within their settings.

3.13.29. Table A.1 of the Cultural Heritage Assessment [\[APP-062\]](#) details the numbers of designated heritage assets within the study area, with the vast majority being located within the IoM. Those taken through to assessment are listed at Tables A.2 and A.3, with the gazetteer included at Appendix B of the Cultural Heritage Assessment setting out reasons for scoping out a range of heritage assets. Such reasons principally relate to there being no obvious relationship with the sea.

3.13.30. In respect of effects on setting of terrestrial heritage assets, the mitigation measures proposed include painting the turbine components light grey, and restriction of lighting where possible. No further mitigation is proposed.

3.13.31. Section 8.8.7 of ES Volume 2, Chapter 8 [\[APP-026\]](#) summarises the potential for visual change within the setting of heritage assets during all phases. This is more fully assessed in ES Volume 4, Annex 8.2: Cultural Heritage Assessment [\[APP-062\]](#).

3.13.32. The Proposed Development would be located within part of a seascape which makes a contribution to setting for a range of designated historic assets including WHS, Scheduled Monuments, Ancient Monuments (IoM), listed buildings,

Registered Buildings (IoM), registered historic parks and gardens and conservation areas. The introduction of the turbines and offshore substation platforms within the seascape has the potential to alter the setting and significance of above ground designated heritage assets to the point that the significance of the assets is altered through changes in visual aspects of the setting. The settings assessment finds that there would be no significant direct effects (which overall would be minor or negligible adverse) on all designated heritage assets during all phases.

- 3.13.33. Section 1.7 [\[APP-062\]](#) considers the cumulative effects assessment, summarised in Table 1.10. The cumulative assessment in scenario 3 finds there to be likely moderate adverse effects (significant in EIA terms) on number of designated assets in the IoM only. All four are assessed as having strong functional connections to the sea, with the seascape forming an important part of their setting and contributing to their significance:

- Point of Ayre lighthouse
- Point of Ayre foghorn
- Winkie lighthouse
- Maughold lighthouse

- 3.13.34. Paragraph 1.8.1.4 of [\[APP-062\]](#) notes that these predicted significant cumulative effects would arise principally from the construction of the planned Mooir Vannin OWF, which would introduce turbines much closer to the coast of the IoM. In making this assessment, the maximum parameters indicated in the Mooir Vannin OWF preliminary environmental report (100 turbines with a tip height of 389m and associated infrastructure) have been utilised.

### **Issues considered during the Examination: terrestrial heritage**

- 3.13.35. Issues considered further during the Examination relating to terrestrial historic environment matters were:

- Isle of Man heritage assets
- English Lake District World Heritage Site

- 3.13.36. During the course of the Examination the ExA carried out unaccompanied site inspections (USIs) [\[EV3-001\]](#) and [\[EV3-002\]](#) in order to view a range of the designated heritage assets potentially affected by the Proposed Development, both on the IoM and in coastal northwest England, including the Lake District. The insights gained during these USIs have been taken into account by the ExA in its conclusions on the matters set out below.

### **Isle of Man Heritage Assets**

- 3.13.37. The IoM government TSC initially raised no comments in relation to heritage assets in its relevant representation nor local impact report. The first version of the SoCG [\[REP1-034\]](#) directed comments relating to heritage assets to Manx National Heritage (MNH). MNH is responsible for the statutory protection and promotion of the cultural heritage of the IoM.

- 3.13.38. At the same deadline a letter of comfort was submitted by the Applicant from MNH [\[REP1-036\]](#). It notes that given the location of the Proposed Development outside of IoM territory, it has no statutory requirement to submit further comment. It did not raise any opposition and made no comments relating to the setting of heritage assets on the IoM. Given that many of the viewpoint visualisations relate to views from the IoM and the Applicant's conclusions of moderate adverse effects on setting

of a range of IoM monuments, the ExA questioned this matter further (ExQ1 HE 1.10 [\[PD-004\]](#)).

- 3.13.39. The IoM government's response [\[REP3-033\]](#) clarified the position of MNH as also being that of the IoM government. It also clarified that whilst Manx Ancient Monuments legislation is silent on the concept of setting, the Manx Museum and National Trust Act 1959 refers to protection of buildings, places and their surroundings. In the absence of more detailed IoM legislation and policy, MNH often utilises UK policy including the NPPF definition of setting and makes reference to Historic England guidance.
- 3.13.40. The IoM government also provided a list of IoM monuments taken forward for assessment, with the latest publicly available descriptions for each site. It also clarified that assessments of significance had not been undertaken by MNH. Overall, it considered that the selected viewpoints provided a good range of views towards the development and of the potential scale of impact upon the setting of the island's heritage assets. It agreed with the reasons for scoping out certain coastal assets and confirmed satisfaction with the selection of and assessment of the heritage assets in ES Chapter 8, including those listed as being assessed as having a moderate adverse impact.
- 3.13.41. No further detailed submissions were made by the IoM government on the matter, including in the final SoCG [\[REP6-079\]](#) where table 1.14 simply sets out that the letter of comfort from MNH reflects the IoM national position on the matter of effects on IoM heritage assets.

#### **The English Lake District World Heritage Site**

- 3.13.42. Historic England made no specific comments relating to the WHS in its RR [\[RR-013\]](#) nor its WR [\[REP1-046\]](#). In response to ExQ1 HE 1.11 [\[REP3-032\]](#), it noted the reasons for scoping out of both Hadrian's Wall and the English Lake District WHS from Appendix B of the Cultural Heritage Assessment [\[APP-062\]](#). It agreed that given the distance of the Proposed Development from the Hadrian's Wall WHS that there would be very little risk of impact on its significance.
- 3.13.43. Regarding the English Lake District WHS, it accepted that whilst the relationship with the sea is not so clearly a part of its significance, the scale of the WHS, and the emphasis on harmonious beauty, means that it is reasonable to consider impacts from out to sea, including the Proposed Development. It accepted that given the distance offshore and associated context, the impact would be very slight on this WHS but is reasonable that it is properly assessed. Historic England also considered that other OWFs in the vicinity should be part of an assessment of cumulative impacts on the Outstanding Universal Values of the English Lake District WSH.
- 3.13.44. The Applicants response [\[REP4-007\]](#) confirmed that early pre-application consultations were carried out with Historic England with regard to the approach to assessment of WHS and that their comments were incorporated. The Applicant reiterated that whilst the Outstanding Universal Values (OUV) do not mention the sea, or the visual relationship between the land and surrounding seascape, the seascape undoubtedly forms part of the wider setting of the WHS but is not expressed in the OUVs as contributing positively to its attributes nor special qualities. The visualisations from the Lake District in the direction of the Proposed Development incorporate highly visible modern industrial infrastructure which includes existing onshore and offshore wind turbines. The turbines of the Proposed Development

would only be intermittently visible and even then, largely behind existing wind turbines.

- 3.13.45. The Applicant's initial assessment determined that there would be no change to the Outstanding Universal Value of the WHS, and it was therefore not considered further in the detailed heritage assessment. Given that no impacts were assessed upon the Outstanding Universal Values of the Lake District WHS, no assessment of cumulative impact was undertaken.
- 3.13.46. In response to ExQ2 HE 2.1, the Applicant stated that discussions with Historic England regarding potential cumulative impacts to the Outstanding Universal Values of the English Lake District WHS were ongoing. No further comments were made by Historic England regarding the cumulative effects on setting of WHS and the final SoCG [\[REP6-077\]](#) includes this and the setting of other English terrestrial heritage assets as an agreed matter.

***ExA considerations on terrestrial heritage matters***

- 3.13.47. In view of the above reported matters relating to setting of terrestrial heritage assets, the ExA considers that the Applicant has appropriately and adequately assessed the significance of the heritage assets affected by the Proposed Development, as well as its assessment of the likely impact on significance, and in this regard the Application meets the requirements of NPS EN-1.
- 3.13.48. The Decisions Regulations require the SoS to have regard to the desirability of preserving, amongst other things, the setting of listed buildings and scheduled monuments. The ExA is content that the assessment of setting of the terrestrial heritage assets scoped into the heritage assessment is sufficient for the SoS to carry out its duty in respect of English heritage assets.
- 3.13.49. The ExA agrees with the Applicant's assessment of WHS, both Hadrian's Wall and the English Lake District (including its reasoning for scoping out for the project alone and cumulatively with other projects) because whilst there are clear views out to the Irish Sea from a range of Lake District viewpoints, the visualisations demonstrate that the scale of the turbines would appear diminished in the context of the distance from the WHS and the intervening existing OWFs within the Irish Sea. The OUVs do not include the seascape, and the ExA is satisfied that seascape is not a noted feature of the attributes of the WHS nor its special qualities.
- 3.13.50. The ExA considers there would be no harm to the significance of the setting of any of the assessed English designated heritage assets, given the distance of the Proposed Development from the coastline and the intervening features which include existing OWFs which are closer to such assets.
- 3.13.51. The ExA agrees with the Applicant's assessment with the range of heritage assets on the IoM of which their setting would be most affected by the presence of the wind turbine generators, and that such effects would be moderate adverse in the cumulative scenario together with Mooir Vannin OWF. These are the Point of Ayre lighthouse, Point of Ayre foghorn, Winkie lighthouse and Maughold lighthouse. All four assets have strong functional connections to the sea, with the seascape forming an important part of their setting and contributing to their significance. However, the final design of the Mooir Vannin OWF is not before the ExA and, whilst cumulative effects would arise, the ExA cannot make informed conclusions on the level of harm that would result.

- 3.13.52. The ExA is satisfied that all other cumulative effects, including with Morecambe OWF and the transmission assets, would not result in harm to the setting of terrestrial heritage assets.
- 3.13.53. The ExA finds that no additional mitigation is necessary in respect of effects to the setting of terrestrial heritage assets.
- 3.13.54. Effects on the English Lake District are also addressed in the SLVIA sub-section of this Report below and the ExA notes that Natural England raised no concerns. The Protected Landscapes Duty is also covered there.

### **Conclusions on marine and terrestrial historic environment matters**

- 3.13.55. The ExA is satisfied that the ES provides a reasonable assessment of potential impacts upon the marine historic environment and provides adequate safeguards to ensure that known and unknown offshore heritage assets will be best avoided and, as such, the provisions of paragraphs 2.8.165 to 2.8.176 of EN-3 and policies NW-HER-1 and NW-SCP-1 of the NWMP have been met.
- 3.13.56. The ExA accepts the Applicant's assessment of no significant residual effects to marine archaeology subject to mitigation secured within the recommended DCO including adoption of a protocol for archaeological discoveries and the ExA recognises the beneficial effects of archaeological investigation and data sharing that would result have been taken into account in that assessment.
- 3.13.57. The ExA finds that there would be no harm to the setting of terrestrial IoM and English designated heritage assets (including WHS), and to NDHA. The proposed Mooir Vannin OWF is not before the ExA, therefore the ExA cannot make informed conclusions on the level of cumulative harm to the setting of IoM heritage assets that would result. The ExA is satisfied that all other cumulative effects, including with Morecambe OWF and the transmission assets, have been adequately assessed and together would not result in harm to the setting of terrestrial heritage assets.
- 3.13.58. The SoS can be satisfied that the policy tests within section 5.9 of NPS EN-1 have been met, and that the Application enables regard to be had to Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010. The overall level of harm to heritage assets would be neutral and therefore a heritage balance against the public benefits of the Proposed Development is unnecessary.
- 3.13.59. Overall, the ExA concludes that the Proposed Development would have no likely significant effects on both the marine and terrestrial historic environment and is satisfied that mitigation would be adequately secured through the recommended DCO. In this respect, the ExA consider that both offshore and onshore historic environment matters do not weigh for or against making of an Order.

### **HUMAN HEALTH EFFECTS**

- 3.13.60. NPS EN-1 paragraphs 4.3.4, 4.4.1 to 4.4.7, 5.2.17, 5.12.1 and 5.16.2 explain how human health effects must be considered in DCO applications for energy developments.

### **The Application: human health effects**

- 3.13.61. The Applicant's assessment of human health effects of the Proposed Development is contained primarily in ES Volume 2, Chapter 14 which includes how the



application addresses the provisions of the NWMP where inter-related matters have potential relevance to human health [\[APP-018\]](#).

3.13.62. ES Chapter 14 [\[APP-018\]](#) takes as its input the residual effect conclusions of the inter-related technical disciplines. In this regard the health assessment relies on the measures adopted as part of the Morgan Generation Assets set out in those chapters and does not repeat them.

3.13.63. The ES concludes that the Proposed Development would potentially have the following inter-related population health effects [\[APP-018\]](#):

- Impacts on lifeline ferries would have a minor adverse effect, although disruption of medical and related deliveries and journeys is not anticipated to be such as to affect public health
- Visual impacts of the Proposed Development are assessed to have both minor adverse and minor beneficial effects on human health in relation to community identity and culture
- Loss of or restricted access to commercial fishing grounds is assessed to have a minor adverse effect for population health
- Renewable energy generation and subsequent reduced greenhouse gas emissions would have a minor beneficial effect for population health
- Wider societal infrastructure and resources in relation to improved energy security would have a moderate beneficial effect for population health. Only this last effect is assessed as significant in EIA terms [\[APP-018\]](#)

3.13.64. ES Chapter 15 summary of likely significant inter-related effects is also of relevance, which concludes that there are no inter-related effects of greater significance than assessed individually for economic, social, tourism or IoM impacts related to any potential adverse effects on lifeline ferry services [\[APP-019\]](#).

#### ***ExA considerations on human health matters***

3.13.65. The ExA notes that with a relevance to human health and safety, the cumulative effects assessment (CEA) for shipping and navigation considered increased collision and allision risk together with the proposed Moir Vannin OWF to be unacceptable (pages 142 to 152 [\[APP-025\]](#)). However, following changes to the separation distance between Moir Vannin OWF and the Proposed Development as reported in the Shipping and Navigation section of this Report, the elevated residual risk after mitigation and applied controls has been reduced and is now agreed in the final SoCG with the Maritime and Coastguard Agency as ‘tolerable’ as mitigated to as low as reasonably possible [\[REP6-080\]](#). This safety risk assessment is discussed in detail in section 3.11 of this Report.

3.13.66. Other than as discussed in the sections of this Report on commercial fishing, shipping and navigation, and other offshore infrastructure and sea users the ExA has not noted any interventions or objections submitted to the Examination by IPs on any potential adverse human health effects.

#### **ExA conclusions on human health matters**

3.13.67. The ExA accepts the Applicant’s assessment that there would be no likely significant adverse effects to human health and quality of life including as inter-related to other environmental matters, noting the conclusions on navigational risk to shipping referred to in the shipping and navigation and socio-economic sections of this Report.

- 3.13.68. The ExA finds that policy tests regarding human health have been satisfied and that by themselves there would be no impacts of the Proposed Development on human health that constitute a reason to refuse consent or require specific mitigation under the Planning Act 2008 in accordance with NPS EN-1 paragraph 4.4.4.7.
- 3.13.69. The ExA finds that human health matters do not weigh for or against making of an Order.

## **SEASCAPE, LANDSCAPE AND VISUAL RESOURCES**

- 3.13.70. This section considers the effects of the Proposed Development on seascape, landscape and visual resources and to receptors within the Irish Sea, England, Wales and the IoM. These include nationally and internationally designated landscapes at the Isle of Anglesey and the Lake District.
- 3.13.71. In its consideration of the topic the Examining Authority (ExA) has had regard to the Overarching National Policy Statement (NPS) for Energy EN-1 as set out in section 5.10, and section 2.8 of the NPS for Renewable Energy Infrastructure EN-3 in relation to offshore wind specifically paragraphs 2.8.204 to 2.8.212, 2.8.261 to 2.8.264, and 2.8.349 to 2.8.352.
- 3.13.72. The ExA has also had regard to the Protected Landscapes duty at section 245 of the Levelling up and Regeneration Act 2023 (LURA).

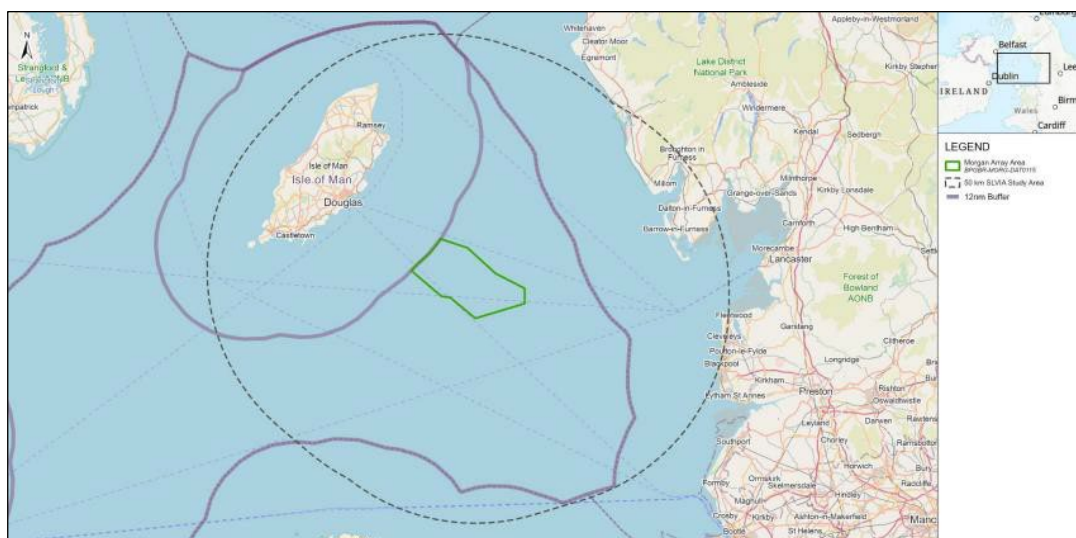
### **The Application: seascape, landscape and visual resources**

- 3.13.73. ES Volume 2, Chapter 10: Seascape, landscape and visual resources [\[APP-014\]](#) presents the assessment of the potential impacts of the Proposed Development, and comprises a Seascape Landscape and Visual Impact Assessment (SLVIA). The chapter presents the existing environmental baseline, identifies any assumptions or limitations encountered in compiling the environmental baseline information and presents the potential environmental effects of the Proposed Development on seascape, landscape and visual resources during the construction, operation and maintenance, and decommissioning phases, together with proposed mitigation measures.
- 3.13.74. ES Chapter 10 [\[APP-014\]](#) is supported by a range of Annexes in Volume 4:
- Annex 10.1: Seascape, landscape and visual resources legislation and planning policy context [\[APP-034\]](#)
  - Annex 10.2: Seascape and landscape character baseline technical report [\[APP-035\]](#)
  - Annex 10.3: Visual baseline technical report [\[APP-036\]](#)
  - Annex 10.4: Seascape, landscape and visual resources impact assessment methodology [\[APP-037\]](#)
  - Annex 10.5: International and nationally designated landscape study [\[APP-038\]](#)
  - Annex 10.6: Seascape Visualisations:
    - Part 1 (Figures 1.1-9.1) [\[APP-039\]](#)
    - Part 2 (Figures 10.1-163) [\[APP-040\]](#)
    - Part 3 (Figures 16.4-25) [\[APP-041\]](#)
    - Part 4 (Figures 26-43) [\[APP-042\]](#)
    - Part 5 (Figures 44-61) [\[APP-043\]](#)
    - Part 6 (Figures 62-74) [\[APP-044\]](#)

### **Baseline**

- 3.13.75. Section 10.4 [APP-014] sets out the baseline environment, supported in detail by annexes 10.2 [APP-035] and 10.3 [APP-036]. Baseline desktop studies and fieldwork activities undertaken are detailed in the documents, and agreement on methodology reached through relevant pre-application consultations is set out. The study area is a 50km radius from the array area, shown in Figure 36 below. Section 10.4.2 [APP-014] explains that it was formulated in accordance with the Guidelines for Landscape and Visual Impact Assessment: Third Edition, 2013 (GLVIA3) and discussed with relevant consultees and local authorities. The study area was extended to 60km solely for the purpose of assessing effects on nationally and internationally designated landscapes.

**Figure 36: SLVIA Study Area<sup>50</sup>**



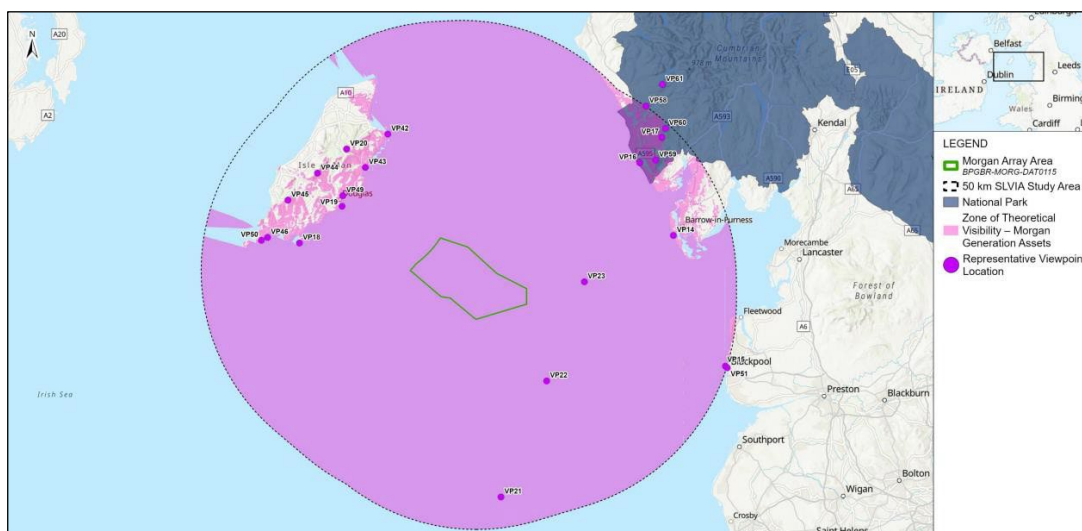
- 3.13.76. The range of desktop resources which informed the baseline of seascape and landscape character are detailed in Annex 10.2 [APP-035]. These include documents relating to onshore national character areas for England, Wales and the IoM, together with seascape character assessment including that contained within the North West Inshore and North West Offshore Marine Plan (2018) (NWMP). Site specific surveys and fieldwork relate to the selection of representative viewpoints. Further detail is provided in Annex 10.3 [APP-037].
- 3.13.77. The seascape and landscape character areas scoped into the SLVIA are set out in Table 10.9 [APP-014] and illustrated in Figures A.1 to A.6 of Appendix A of Annex 10.2 [APP-035]. In England, the seascape character areas comprise seven marine character areas (MCA) as defined by the Marine Management Organisation (MMO) in the Marine Plan. Two Welsh MCAs and five Seascape Sensitivity Zones (SSZs) fall within the SLVIA study area. There is no published data on seascape character for the IoM territorial waters, therefore Annex 10.2 [APP-035] defines five marine character areas encircling the island.
- 3.13.78. Onshore landscape character areas for England and the IoM are set out in section 1.3.4 and illustrated in Figures A.1 to A.6 of Annex 10.2 [APP-035].
- 3.13.79. The visual baseline is set out in section 1.4.8 [APP-014] and Annex 10.3 [APP-036], and identifies the ZTV with the 23 representative viewpoint locations and the sensitive receptor groups considered. These are listed in Table 10.10 and illustrated

<sup>50</sup> Source: ES Volume 2, Chapter 10, Figure A.2 [APP-014] – do not scale.

as photomontages and ‘wirelines’ in Annex 10.6 [APP-039], [APP-040], [APP-041], [APP-042], [APP-043], [APP-044].

- 3.13.80. Figure 37 below illustrates the location of the representative viewpoints, both offshore from ferry routes and onshore and focused on the IoM, northwest England coast and the Lake District.

**Figure 37: Zone of Theoretical Visibility and representative viewpoint locations<sup>51</sup>**



## Mitigation

- 3.13.81. The single primary mitigation measure adopted as part of the project to reduce potential impacts on seascape, landscape and visual amenity is the colour of the wind turbines, to be light grey (RAL 7035) unless otherwise directed by Trinity House and the MMO. No further mitigation is proposed.

## Assessment of Effects: Seascape and Landscape

- 3.13.82. Section 10.8.2 [APP-014] sets out the potential effects on seascape and marine character areas during all phases (construction, operations and maintenance, and decommissioning) as a result of the maximum design scenario (MDS); up to 68 wind turbines with a maximum rotor diameter of 32 m and a maximum blade tip height of 364 m above sea level at Lowest Astronomical Tide.
- 3.13.83. The assessment concludes that the potential impact would be caused by both static and moving elements of the wind turbines, the offshore substation platforms and construction vessels and helicopters, affecting the characteristics and perceptions of the character areas within the study area. The character areas identified as experiencing the most potential change are:
- MCA 38 Irish Sea South (host seascape – direct effects)
  - MCA A Dreswick Point to Maughold Head IoM southeast inshore waters (adjacent seascape – indirect effects)
  - SSZ 5 North Wales and Anglesey Outer Offshore (adjacent seascape – indirect effects).

<sup>51</sup> Source: ES Volume 4, Annex 10.3: Visual baseline technical report, Figure A1 [APP-036] - do not scale.

- 3.13.84. The temporary effects during construction and decommissioning on that part of MCA 38 Irish Sea South which would be occupied by the Proposed Development are judged to be moderate to major adverse, and which the Applicant describes as 'potentially significant'. The significance of effect on seascape character would reduce with distance from the array area. The Applicant concludes a small to medium magnitude of impact would arise overall to MCA 38 resulting in a minor to moderate adverse (not significant) effect for MCA 38 Irish Sea South when considered as a whole. Indirect and temporary seascape effects on MCA A (IoM) and SSZ 5 (Wales) during construction and decommissioning is overall assessed to be minor adverse and not significant.
- 3.13.85. During operation and maintenance, the magnitude of the seascape impact within the array area itself (MCA 38 Irish Sea South) is deemed to be large, with the potential impact on seascape character reducing with distance. The effects are judged to be moderate to major adverse, which section 10.8.2 of the assessment concludes as not significant in EIA terms.
- 3.13.86. The seascape effects on MCA 'A' (IoM) are judged by the Applicant as a whole in section 10.8.2 to be minor to moderate adverse, and overall effects on SSZ 5 (Wales) as minor adverse. The effects on both seascape character areas are concluded to be not significant in EIA terms.
- 3.13.87. Section 10.8.3 [\[APP-014\]](#) sets out the effects that would potentially arise on terrestrial national landscape character areas as a result of the MDS. Three national landscape areas on the IoM were identified as having a greater potential to be impacted by the Proposed Development: IoM Landscape Character Types D Incised Slopes, E Rugged Coast and H Coastal Cliffs.
- 3.13.88. The landscape character effects are assessed to be minor to moderate adverse and not significant during all phases. It is noted that the effects on LCT E during the operations and maintenance phase are nearer to the moderate end of the minor to moderate range compared with LCT D and H.
- 3.13.89. Potential effects on the special qualities, themes and criteria of nationally and internationally designated landscapes are considered in Annex 10.5 [\[APP-038\]](#). The Welsh designated Isle of Anglesey National Landscape lies partly within the 60km study area but was scoped out of the assessment following pre-application consultation with both the Isle of Anglesey Council and NRW. The assessment focussed on the Lake District National Park and the English Lake District WHS This concludes negligible to minor adverse (not significant) effects on the particular special qualities or attributes of outstanding universal value selected as relevant to the SLVIA.

#### **Assessment of Effects: Visual**

- 3.13.90. Sections 10.8.5 to 10.8.12 of [\[APP-014\]](#) assess the potential effects on the identified receptors: users of National Trails and other long distance paths, other land with public access, users of national cycle routes, people at main coastal settlement seafronts, people travelling along coastal roads and railways, users of main ferry routes, and users of commercial, recreational and fishing vessels.
- 3.13.91. Effects were considered during all phases as adverse for all representative viewpoints, ranging from negligible to moderate adverse. The greatest visual effects were found at the following representative viewpoints (all in the operations and maintenance phase):



- Viewpoint 18: Herring Tower Trig Point, Langness Peninsula, IoM: Minor to moderate adverse
- Viewpoint 19: Arch Southwest of Douglas Head, IoM: Minor to moderate adverse
- Viewpoint 20: Snaefell Summit station trig point, IoM: Minor to moderate adverse
- Viewpoint 22: Liverpool to Douglas Ferry: Minor to moderate adverse
- Viewpoint 23: Heysham to Douglas Ferry: Moderate adverse
- Viewpoint 42: Maughold Head Lighthouse, IoM: Moderate adverse
- Viewpoint 43: Old Laxey, IoM: Moderate adverse (and minor to moderate adverse during construction and decommissioning)
- Viewpoint 49: Douglas Promenade, IoM: Moderate adverse (and minor to moderate adverse during construction and decommissioning)
- Viewpoint 50: Coast Path at Chasm/ Sugarloaf, IoM: Minor to moderate adverse

3.13.92. The SLVIA also concludes that moderate adverse visual effects would arise during the operations and maintenance phase on people at the coastal settlements of Douglas and Old Laxey, and other similar publicly accessible seafront locations on the east coast of the IoM where views of the Proposed Development are available at distances ranging from 22.5 to 25km, and on users of the Raad ny Foillan Coastal Path. Users of ferries are expected to experience moderate to major adverse effects during the operations and maintenance phase where the ferries pass within or adjacent to the Morgan Array Area; this would diminish at other points along the route further away from the array. Similar effects would arise to recreational sailors.

3.13.93. The Applicant in its SLVIA considers all such effects to be not significant, with no additional mitigation being proposed.

3.13.94. The seascape, landscape and visual effects are summarised in Table 10.23 of [APP-014], including consideration of the magnitude of impact, sensitivity of receptor and significance of effect during all phases on all relevant seascape/ marine character areas, national landscape character areas, visual resources and receptors and each of the 23 representative viewpoints.

### **Cumulative Effects Assessment**

3.13.95. Section 10.6 of ES Volume 2, Chapter 10 [APP-014] sets out the cumulative effects assessment. Paragraphs 10.9.4.58 to 10.9.4.59 and paragraphs 10.9.4.116 to 10.9.4.117 set out the significance of the cumulative visual effects during operation on users of the Raad ny Foillan Coast Path and individuals at the coastal settlements of Douglas and Laxey as moderate to major adverse and not significant. Paragraph 10.13.2.3, in summarising cumulative effects, notes “potential” significant cumulative effects. Table 10.24 sets out the cumulative effects on the Coast Path and Douglas/Laxey seafronts as moderate to major adverse (not significant).

3.13.96. Cumulative effects on the special qualities and attributes of outstanding universal values of the English Lake District National Park are detailed in section 1.7.3 of Annex 10.5 of [APP-038]. This concludes the additional, cumulative effects on the designated sites to be in the range of negligible to minor adverse and not significant.

### **Issues considered during the Examination: seascape, landscape and visual effects**

3.13.97. Issues considered further during the Examination relating to seascape, landscape and visual effects were:

- Adequacy of visualisations
- The assessment of significance of moderate and major adverse effects of the Proposed Development in EIA terms
- Effects on the IoM landscape and visual resources
- Effects on designated landscapes

3.13.98. During the course of the Examination the ExA carried out unaccompanied site inspections (USIs) [\[EV3-001\]](#) and [\[EV3-002\]](#) in order to view a range of the character areas and viewpoints potentially affected by the Proposed Development. The inspections included viewpoints along the northwest coast of England, the Lake District, and the IoM. The ExA also directly viewed the location of the Proposed Development with the Irish Sea and of nearby existing offshore wind farms (OWFs) via the Heysham to Douglas and Douglas to Liverpool ferry routes. The insights gained during these USIs have been taken into account by the ExA in its conclusions on the matters set out below.

3.13.99. An updated version of ES Volume 2, Chapter 10 was updated at Deadline 6 [\[REP6-036\]](#), with the only change being an errata sheet initially submitted at the pre-Examination procedural deadline [\[PD1-003\]](#).

#### ***Adequacy of visualisations***

3.13.100. Natural England in its relevant representation [\[RR-026\]](#) requested that single frame images with a horizontal frame of view of 39.6 degrees be included within the SLVIA, and also pointed out that some images had issues with obscuring of WTGs from sun glare. The Applicant supplied additional and amended visuals at the pre-Examination procedural deadline [\[PD-012 to 014\]](#), and subsequently Natural England confirmed satisfaction and made no further comments [\[REP1-053\]](#).

3.13.101. The ExA questioned the extent of pre-application engagement from relevant stakeholders on the selection of representative visualisation viewpoints (ExQ1 SLV 1.1 [\[PD-004\]](#)). The Applicant's response [\[REP3-006\]](#) set out the pre-application feedback from Natural England, and clarified that the IoM government did not request any further viewpoints, nor did any other stakeholders (such as local authorities, who also did not engage in the Examination).

#### ***The assessment of significance of moderate and major adverse effects of the proposed development in EIA terms***

3.13.102. In its first written questions ExQ1 SLV 1.3 to SLV 1.6 [\[PD-004\]](#) the ExA questioned a range of inconsistencies in the Applicant's assessment of both landscape and visual effects and conclusions on significance in EIA terms. In particular, the ExA sought clarification on the Applicant's terminology and conclusions on moderate (and moderate to major) adverse effects being classified as not significant in some instances but not others, and the use of the term 'potentially significant'. This applied to both project alone and cumulative effects.

3.13.103. In response, the Applicant submitted a clarification note [\[REP3-010\]](#). In this document, the Applicant sought to undertake a more detailed assessment of the receptors where moderate or major adverse effects were found. Tables 1.1 to 1.4 of the note summarise the effects on landscape and seascape receptors/ visual receptors (both alone and cumulatively) as presented within the Application compared with the clarified information in the note. The result of this exercise was that some effects were increased to significant in EIA terms.

3.13.104. The receptors which were affected by this review include:

- Landscape and seascape receptors:
  - MCA 38 Irish Sea South: moderate to major adverse effects for that part of MCA 38 close to the array clarified as significant, but overall for the MCA as a whole (decreasing with distance) as moderate adverse and not significant. The overall significance of effect is the same as that identified in the ES. Cumulatively (for Tiers 1 and 2 projects), the moderate to major adverse effect was raised from not significant to significant.
  - IoM LCT E Rugged Coast: effect judged in the ES to be minor to moderate adverse and not significant. The clarification note raised the effect on LCT E to be moderate adverse and significant.
- Visual receptors (project alone):
  - Users of the Raad ny Foillan Coast Path: moderate adverse effect reduced to minor to moderate adverse inland (not significant) but the moderate adverse effect at the coast was raised to significant in the clarification note.
  - People at settlements of Douglas and Laxey: moderate adverse effect reduced to minor to moderate adverse inland (not significant) but moderate adverse effect raised to significant at the coast.
  - People onboard ferries: effects for both ferry routes to Douglas clarified as moderate to major adverse and significant when close to the array, reducing to minor to moderate adverse and not significant for the ferry routes as a whole.

3.13.105. In terms of cumulative effects on visual receptors, the note concludes the same effects would be not significant in EIA terms. It explains that the scale of the addition of the Proposed Development would seem relatively small against all the other OWFs in its presence, and the visual effect alongside Tier 1 existing OWFs in particular. When considered in the Tier 2 cumulative scenario, the Proposed Development would be less prominent than the proposed Moir Vannin OWF which would be located much closer to viewers on the IoM.

### ***Effects on the Isle of Man***

- 3.13.106. The IoM government [[REP3-033](#)] responded to ExQ1 SLV 1.4 that it was satisfied with the SLVIA methodology and the range, location, accuracy and quality of visualisations relating to the IoM viewpoints. It also confirmed agreement with the Applicant's assessment of effects listed in paragraph 3.13.104 above including those viewpoints where a moderate to major adverse effect is predicted to arise (whilst also questioning the inconsistencies in classification of significance of effect).
- 3.13.107. Paragraph 2.8 of its Local Impact Report (LIR) [[REP1-047](#)] notes that the SLVIA establishes significant effects on visual receptors on the island, particularly on coastal landscapes and impacting the Raad ny Foillan long distance coastal path. It goes on to say that the turbines would be visible in the context of an expansive seascape with the presence of existing operational offshore windfarms, and noted that the Proposed Development is closer to the IoM than any current operational windfarms.
- 3.13.108. No submissions were made by the IoM government in response to the Applicant's clarification note [[REP3-010](#)]. The SoCG [[REP6-079](#)] at table 1.5 sets out all matters to be agreed relating to SLVIA matters, including the conclusions of the assessment both alone and cumulatively.

### ***Effects on designated landscapes***

- 3.13.109. The ExA asked Natural England, NRW and Historic England (ExQ1 SLV 1.7 [\[PD-004\]](#)) whether they had any specific comments to make on ES Volume 4, Annex 10.5: International and nationally designated landscape study [\[APP-038\]](#), given that none of the consultees had referenced the document in their responses received to date. Views were sought in relation to predicted effects on the following designated sites:
- Isle of Anglesey National Landscape
  - The Lake District National Park
  - The English Lake District World Heritage Site
- 3.13.110. Natural England [\[REP3-048\]](#) deferred to Historic England for comments relating to WHS, and confirmed that it has no outstanding concerns with the SLVIA assessment regarding potential impacts on designated landscapes, including the Lake District National Park.
- 3.13.111. NRW confirmed both in its relevant representation [\[RR-027\]](#) and in its response to ExQ1 SLV 1.7 the Applicant's decision to scope out statutorily designated landscapes in Wales from the SLVIA, and had no further comments to make on such matters.
- 3.13.112. Historic England's [\[REP3-032\]](#) response in relation to the WHS is discussed in the sub-section of this Report discussing impacts to terrestrial heritage assets.
- 3.13.113. UK government guidance on the Protected Landscapes duty was published during the Examination, on 16 December 2024. It sets out how the duty at s245 of the LURA 2023 is intended to operate and providing broad principles to guide relevant authorities in complying with it.
- 3.13.114. In ExQ2 (SLV 2.1 [\[PD-009\]](#)) the ExA asked the Applicant and Natural England to provide comment on the relevance of the Protected Landscapes duty, in particular that which relates to their setting.
- 3.13.115. The Applicant in its response (Table 2.14, [\[REP5-015\]](#)) set out that it considered it had complied with its duty to seek to further the purpose of Protected Landscapes to the extent it is relevant to the application, noting the wholly offshore nature of the Proposed Development with no direct impacts on any protected landscape as demonstrated in ES Volume 2, Chapter 10 [\[APP-014\]](#). It considered that the SoS has sufficient information to conclude that the Proposed Development does not conflict with the duty.
- 3.13.116. Natural England [\[REP5-080\]](#) clarified that the new guidance does not change its advice, and that it has no outstanding concerns regarding SLVIA.

### ***Other seascape, landscape and visual matters***

- 3.13.117. A number of relevant representations included reference to landscape and visual effects, however these submissions clearly related to the onshore works associated with the grid transmission and substation works only including [\[RR-046\]](#), [\[RR-049\]](#), [\[RR-055\]](#), [\[RR-058\]](#), [\[RR-063\]](#), [\[RR-081\]](#), [\[RR-089\]](#), [\[RR-092\]](#), [\[RR-106\]](#) and [\[RR-107\]](#), which are subject to a separate application. Newton with Clifton Parish Council made reference to the coastal landscape [\[RR-003\]](#) and [\[PD1-022\]](#) and were asked in ExQ1 SLV 1.9 [\[PD-004\]](#) to substantiate their comments, however no

further submissions were received. No comments were received from any local planning authorities relating to effects on designated landscapes or their setting.

***ExA considerations on seascape, landscape and visual impact matters***

- 3.13.118. The ExA is satisfied with the Applicant's methodology and assessment in respect of seascape, landscape and visual effects of the Proposed Development in that it follows relevant guidance. The Applicant has provided a sufficient and appropriate selection of viewpoints and presentation of visualisations which have enabled the ExA to understand the effects on the seascape, landscape and on visual receptors. The amended and additional visualisations meet the requirements of Natural England and are now acceptable.
- 3.13.119. The provision of the clarification note has provided additional clarity in respect of the significance in EIA terms of the predicted more adverse negative effects on a range of receptors, particularly those from the IoM.
- 3.13.120. There would be clear views of the Proposed Development from a range of viewpoints from northwest England, the IoM and from the ferries which travel between the two. The ExA considers that views from the ferries would be major adverse when travelling past the array area. However, such views would be transient, diminishing with distance and seen in the context of existing OWFs.
- 3.13.121. Paragraph 5.10.15 of NPS EN-1 notes that coastal areas are particularly vulnerable to visual intrusion. From the IoM the ExA considers that there would be moderate to major adverse (significant) visual effects on a range of viewpoints on the south and east coastlines, where currently there are only very distant views of existing OWFs. The Proposed Development would be closer to the IoM than any other existing OWF. The addition of the proposed Mooir Vannin OWF would be much closer still to the IoM coastline. The final visualisations for Mooir Vannin OWF are not before the ExA, as the Marine Infrastructure Consent application had not been submitted at the time of the close of the Examination. Cumulatively, both OWFs together have the potential to have a major adverse and significant effect, both on the landscape and visual resources of the coastline of the IoM. In its conclusions the ExA have had regard to the IoM government's lack of objection on such matters. The sole mitigation which relates to turbine colour would make little difference to the predicted residual effects.
- 3.13.122. In terms of nationally and internationally designated landscapes, the ExA is in agreement with the Applicant's scoping out of Welsh designated landscapes and is also in agreement with its assessment of effects on the landscape and visual resources of the Lake District National Park. Here, the effects on the particular special qualities or attributes of outstanding universal value which are relevant to the SLVIA would be negligible to minor adverse and not significant. The heritage section of this Report separately considers the setting of the English Lake District WHS. NPS EN-1 paragraph 5.10.34 notes that the fact that a proposed project would be visible from within a designated area should not in itself be a reason for the SoS to refuse consent.

**Conclusions on seascape, landscape and visual impact matters**

- 3.13.123. The ExA is satisfied that the Applicant has had regard to the purposes of nationally designated landscapes in accordance with the UK government guidance on the Protected Landscapes duty that was published during the Examination, and with paragraph 5.10.34 of NPS EN-1. The ExA recommends to the SoS that it has sufficient information to conclude on its duty at s245 of the LURA 2023.



- 3.13.124. Based on the findings set out above, the ExA considers that policy requirements with regards to seascape and visual resources in NPS EN-1 (section 5.10) and NPS EN-3 (section 2.8) have been met through consultation and assessment of the effects of the Proposed Development on seascape, landscape and visual resources during its construction, operation and maintenance, and decommissioning phases.
- 3.13.125. As set out above, some effects would be significant. Paragraphs 5.10.5 and 5.10.13 of NPS EN-1 accept that virtually all nationally significant energy projects are likely to have adverse landscape and visual effects, and that mitigation through turbine colour would not sufficiently reduce such effects.
- 3.13.126. Taking all of this into account, the ExA concludes that there would be negative effects on seascape, landscape and visual resources both alone and cumulatively as a result of the Proposed Development. There are a small number of locations where such effects would so adverse that they are significant, but for the majority of receptors such effects would be minor and not significant.
- 3.13.127. Overall, the ExA finds that seascape, landscape and visual effects carry a little weight against making an Order.

## **SOCIAL AND ECONOMIC MATTERS**

- 3.13.128. This sub-section considers social and economic matters, and their inter-relationships with other environmental matters including shipping and navigation which are discussed in greater detail in other sections of this Report.
- 3.13.129. NPS EN-1 Section 5.13 explains how the SoS should treat socio-economic matters in decision-making on DCO applications for energy developments; NPS EN-1 paragraph 4.3.12, and NPS EN-3 paragraph 2.6.2 explain how the likely worst case social and economic effects of Proposed Development must be assessed.
- 3.13.130. NPS EN-3 paragraphs 2.8.178, 2.8.328 and 2.8.345 also reference economic considerations in relation to shipping and navigation and other sea users respectively.
- 3.13.131. Paragraphs 29 and 33 of the North West Marine Plan (NWMP) apply. The NWMP contains the following relevant policy objectives for use of the marine environment of relevance to socio-economics:
- NW-EMP-1, which seeks to “*maximise sustainable economic activity, prosperity and opportunities ...*”
  - NW-CO-1, which “*...encourages proposals to be spatially planned, take account of existing activities, and promote co-existence*”

### **The Application: socio-economic matters**

- 3.13.132. How the Applicant has addressed policy requirements (including the NPPF and the IoM strategies that have relevance to the Proposed Development) regarding social and economic impacts of the Proposed Development is covered in ES Volume 2, Chapter 13: Socio-economics [\[APP-017\]](#).
- 3.13.133. UK industrial strategies of relevance to socio-economic impacts of the Proposed Development are referenced in [\[APP-017\]](#).
- 3.13.134. The primary mitigation or enhancement measure proposed by the Applicant is the provision of an Outline Skills and Employment Plan [\[APP-078\]](#).

- 3.13.135. In the EIA Scoping Opinion, transboundary socio-economics effects were considered to be unlikely and were therefore scoped out of the ES (the IoM having been treated as if it were part of the UK for EIA purposes, by agreement with the IoM government).
- 3.13.136. Potential socio-economic impacts associated with potential adverse effects on lifeline ferry operations are noted in [\[APP-017\]](#) (paragraph 13.4.3.23 and pages 170 and 171), but assessed in Volume 2, Chapter 7: Shipping and navigation [\[APP-025\]](#) and Volume 4, Annex 13.1: Socio-economics technical impact report [\[APP-048\]](#).
- 3.13.137. The Applicant also reports that in assessing any potential indirect impacts upon socio-economic conditions on the IoM, both economic and social receptors have been considered and that the linkages between each receptor and lifeline ferry services is considered (paragraph 13.9.6.15 [\[APP-017\]](#)).
- 3.13.138. Economic considerations are also noted in ES Volume 2, Chapter 6: Commercial fishing (Table 6.4 [\[APP-024\]](#), and in ES Volume 2, Chapter 9: Other sea users (paragraph 9.5.2.15 [\[APP-027\]](#)).
- 3.13.139. The summary of assessment is that while the Proposed Development would have some impacts rated as minor adverse and therefore not significant in EIA terms, employment and gross value added (GVA) (operational phase) impact in North Wales under the “*current capability*” scenario would be ‘moderate beneficial’ and therefore significant in EIA terms [\[APP-017\]](#).
- 3.13.140. The construction, operations and maintenance and decommissioning of the Proposed Development may lead to potential adverse impacts on lifeline ferry services for reasons discussed in ES Volume 2, Chapter 7: Shipping and Navigation [\[APP-025\]](#) which could lead to potential impacts on socio-economic receptors on the IoM as assessed in detail in section 13.9.6 of ES Chapter 13 [\[APP-017\]](#).
- 3.13.141. For all phases, the effect of these socio-economic impacts on the IoM are assessed by the Applicant to be of ‘minor adverse’ significance, therefore not significant in EIA terms.
- 3.13.142. Inter-related potential impacts on the IoM medical and health services and supplies are assessed within ES Volume 2, Chapter 14: Human Health Assessment [\[APP-018\]](#), which assesses effects to be of ‘minor adverse’ significance, therefore not significant in EIA terms.
- 3.13.143. The cumulative effects assessment in ES Chapter 13 [\[APP-017\]](#) concludes ‘moderate beneficial’ effects (significant in EIA terms) for employment and GVA in North-West England and North Wales in the construction phase, and in North Wales for the operations and maintenance and decommissioning phases. All other cumulative effects, beneficial or adverse, are assessed by the Applicant as not significant in EIA terms
- 3.13.144. The assessment concluded that potential adverse socio-economic residual effects on the IoM, inter-related with potential adverse effects on lifeline ferry services cumulatively with other Tier 1 and Tier 2 projects, would be at worst ‘minor adverse’ therefore not significant in EIA terms. The ExA notes that the word “medium” was included in error in the conclusions of Table 13.89 [\[APP-017\]](#) and was corrected in the ‘Errata’ table on page ii of [\[REP6-037\]](#) to “*minor (adverse significance)*”.

- 3.13.145. No other inter-related effects were assessed as likely to result in combined effects of greater significance than assessed individually [APP-017]. The ES Chapter 15 summary of likely significant inter-related effects [APP-019] is also of relevance, which concludes that there are no inter-related effects of greater significance than assessed individually for economic, social, tourism or IoM impacts related to any potential adverse effects on lifeline ferry services .

### **Issues considered during the Examination: social and economic**

- 3.13.146. Klosinski Economic Development Ltd. [RR-018] and David Wertheim [RR-112] made brief representations about socio-economic and supply chain impact related to impact on navigation risk and potential for consequential cancellations of service. Andrew King [RR-085] expressed concern about the consequences of cancellation of ferry services for the IoM and its economy. Neither Klosinski Economic Development Limited, Andrew King nor David Wertheim followed their RR with further representation.
- 3.13.147. Potential adverse economic effects were raised in representations from fisheries IPs and these are discussed in 'Commercial fisheries', section 3.6 of this Report.
- 3.13.148. The LIR from the IoM TSC noted that it does not have concerns on potential socio-economic impacts of the proposed development, excepting the potential impact on the Isle of Man Steam Packet Company Ferry services, during adverse weather conditions [REP1-047, section 2.9].
- 3.13.149. The UK Chamber of Shipping (UKCoS) expressed concern in response to ExQ2 SN2.9 that a "*detailed socio-economic ... impact assessment was not undertaken for lifeline and strategic ferry routes ...*" [REP5-092]).
- 3.13.150. The Applicant's response to UKCoS (paragraphs 22.1.1.6 to 22.1.1.11 [REP6-004]) clarified how socio-economic considerations in relation to impacts on shipping and navigation were assessed in the ES and concluded that once the agreements with the affected operators are in place, this concern will be resolved.
- 3.13.151. The Applicant's closing statement (paragraphs 8.3.2.3 to 8.3.3.3 [REP6-014] summarises its consideration of potential impacts on the IoM economy and lifeline ferry services and its related engagement with the IoM government and with the UK Chamber of Shipping.
- 3.13.152. The Applicant's closing statement [REP6-014] also notes that its socio-economic assessment identified potential beneficial effects supported by the measures within the Outline Skills and Employment Plan [APP-078] which sets out opportunities for engagement to enable local workers and training providers to prepare for anticipated employment opportunities associated with the Proposed Development.
- 3.13.153. The signed final SoCG with the UKCoS reports discussions between the Applicant and its members on socio-economic impacts of the Proposed Development were not yet concluded (see SE.2 [REP6-075]).
- 3.13.154. The closing statement from Stena [REP6-095] includes a response to ExQ2 SN2.9 that confirmed discussions with the Applicant on the impact of ferry route deviations including consideration of the social and economic effects of such deviations were still not concluded.

- 3.13.155. Noting that implementing deviation of ferry services in adverse weather would lead to significant schedule disruption and possible cancellation of sailing, the signed final SoCG with the IoM SPC defers consideration of any socio-economic effects to the IoM TSC (see OI.2 [\[REP6-078\]](#)).
- 3.13.156. The IoM TSC in the final SoCG [\[REP6-079\]](#), noted it is minded to agree that there would be no significant effects on socio-economics receptors in EIA terms for the Morgan Generation Assets cumulatively with other projects and plans; and that the mitigation measures and conditions outlined in ES [\[APP-017\]](#) and the Mitigation and Monitoring schedule [\[APP-076\]](#) are appropriate and would ensure significant effects would be avoided, all subject to confirmation from the IoM SPC that a commercial side agreement (ferry mitigation agreement) with the Applicant has been agreed in principle (which is discussed in section 3.11 of this Report).

#### ***ExA considerations on socio-economic matters***

- 3.13.157. The ExA has not noted any interventions or objections submitted by IPs on any potential adverse socio-economic effects other than as discussed in the sections of this Report on commercial fishing, shipping and navigation, and other offshore infrastructure and sea users.
- 3.13.158. The ExA notes the assessment of significant adverse effects to ferry services in adverse weather and caveats on mitigation of economic effects through commercial side agreements discussed in the shipping and navigation section 3.11 of this Report and considerations of potential economic impact to other infrastructure operators discussed in section 3.12. The ExA accepts the Applicant's assessment that there would be no other likely significant adverse socio-economic effects, and that there would be moderate beneficial employment and GVA impact in the operational phase in North Wales under the current capability scenario.

#### **Conclusions on socio-economic matters**

- 3.13.159. Other than as discussed in sections 3.11 and 3.12 of this Report, the ExA finds that the SoS can be satisfied that the site selection has been made with a view to avoiding or minimising economic loss to the shipping and navigation industries and disruption or economic loss to other offshore industries in accordance with NPS EN-3 paragraphs 2.8.328 and 2.8.345.
- 3.13.160. In accordance with NPS EN-1 paragraphs 5.13.10 and 5.13.11, limited weight may be given to assertions of socio-economic impacts not supported by evidence, and that the SoS may consider provisions the Applicant is proposing to make to mitigate impacts through commercial side agreements not yet concluded at the close of the examination.
- 3.13.161. The ExA accepts the Applicant's assessment that there would be no other likely significant adverse socio-economic effects, and that there would be moderate beneficial employment and GVA impact in the operational phase in North Wales and therefore finds that socio-economic matters (other than as discussed in sections 3.11 and 3.12 of this Report) carry a little positive weight for the making of an order.

### **3.14. GOOD DESIGN**

- 3.14.1. Section 4.7 of NPS EN-1 provides criteria for good design for energy infrastructure, and this is also reflected in section 2.5 of NPS EN-3. Good design goes beyond

aesthetic considerations. As explained in the preceding sections of this Report, opportunities for co-existence with other marine uses has been appropriately considered. The design of the Proposed Development has been previously amended, including the increase in the distance from existing offshore infrastructure (and increase the navigable gap), the introduction of a scallop fishery structures exclusion zone, and increase in minimum lower blade tip height above sea surface to minimise effects on bird flight. The ExA concludes that the Applicant has met the requirements of NPS EN-1 section 4.7 and EN-3 section 2.5.



## **4. SUMMARY OF CONCLUSIONS IN RELATION TO HABITATS REGULATIONS ASSESSMENT**

### **4.1. INTRODUCTION**

- 4.1.1. This Chapter sets out the Examining Authority's (ExA's) summary conclusions relevant to Habitats Regulations Assessment (HRA). This will assist the Secretary of State (SoS), as the Competent Authority, in performing their duties under the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations). The ExA's full analysis of matters relevant to HRA is presented in [Appendix C](#) of this Report.
- 4.1.2. HRA is a legislated process of assessment of the effects of the Proposed Development (if any) on defined sites which are subject to protection pursuant to relevant international obligations to which the UK has subscribed. These sites are referred to here as 'European Sites', and comprise:
- Special Areas of Conservation (SACs), candidate SACs and proposed SACs
  - Special Protection Areas (SPAs) and potential SPAs
  - Ramsar sites and proposed Ramsar sites, and
  - any sites identified as compensatory measures for adverse effects on any of the above.
- 4.1.3. The Proposed Development was identified as giving rise to the potential for likely significant effects (LSE) on European sites and is therefore subject to an HRA.
- 4.1.4. The ExA has been mindful throughout the Examination of the need to ensure that the SoS has the information reasonably required to carry out their duties as the Competent Authority. It has sought evidence from the Applicant and relevant Interested Parties (IPs), including from Natural England and Natural Resources Wales (NRW) as the Appropriate Nature Conservation Bodies (ANCBs), through written questions and Issue Specific Hearings (ISHs).
- 4.1.5. The Proposed Development is not directly connected with, or necessary to, the management of a European site. Therefore, the SoS must make an 'appropriate assessment' (AA) of the implications of the Proposed Development on potentially affected European sites in light of the Conservation Objectives of those sites.
- 4.1.6. In accordance with the precautionary principle embedded in the Habitats Regulations, consent for this Proposed Development may be granted only after having ascertained that it will not adversely affect the integrity of European site(s) and no reasonable scientific doubt remains.

### **4.2. SUMMARY OF MATTERS CONSIDERED DURING THE EXAMINATION**

- 4.2.1. The main HRA matters raised by the ExA, Natural England and other IPs and discussed during the Examination included:
- Offshore ornithology - the approaches used by the applicant in various aspects of the assessments, including:
    - qualifying features
    - age class apportioning
    - non-breeding season methods for apportionment of impacts

- the incorporation of sabbatical birds
  - approach to seasonal definitions particularly for collision risk assessments
  - collision risk model estimates
  - the displacement and mortality rates used
  - characterisation of the baseline for Manx shearwater
  - consideration of Highly Pathogenic Avian Influenza (HPAI)
  - approach to in-combination assessment, including gap filling for historical projects and accuracy of figures used
- Marine mammals:
    - behavioural disturbance
    - mitigation and monitoring

### **4.3. REPORT ON THE IMPLICATIONS FOR EUROPEAN SITES AND CONSULTATION**

- 4.3.1. The ExA produced a Report on the Implications for European Sites (RIES) [\[PD-011\]](#) which compiled, documented and signposted information relevant to the HRA provided in the Application and Examination representations (up to 30 January 2025 only). Consultation on the RIES took place between 6 February and 27 February.
- 4.3.2. The ExA's recommendation is that the RIES and consultation on it, may be relied upon as an appropriate body of information to enable the SoS to fulfil their duties of consultation under Regulation 63(3) of the Habitats Regulations, should the SoS wish to do so. However, given the amount of HRA information submitted following publication of the RIES, the SoS may wish to undertake further consultation to fulfil the duties under Regulation 63(3) of the Habitats Regulations and Regulation 28(4) of the Offshore Habitats Regulations. Notwithstanding, and for clarity, the HRA in [Appendix C](#) of this Report considers all HRA representations made by IPs during the Examination, including those made after consultation on the RIES.

### **4.4. SUMMARY OF FINDINGS IN RELATION TO LIKELY SIGNIFICANT EFFECTS**

- 4.4.1. Under Regulation 63(1) of the Habitats Regulations, the Competent Authority must consider whether a development will have LSE on a European site, either alone or in combination with other projects or plans.
- 4.4.2. The Applicant's HRA Stage 1 Screening Report ([\[APP-099\]](#), revised in [\[REP6-067\]](#)) identified 71 European sites within the UK National Site Network (NSN) for inclusion within the assessment. The locations of the European sites relative to the proposed development are shown on Figures 1.4, 1.7 and 1.8 of the HRA Stage 1 Screening Report.
- 4.4.3. With regard to non-UK sites, the HRA Stage 1 Screening Report also identified 11 Republic of Ireland and 17 French sites designated for Annex II marine mammal qualifying features and 7 Republic of Ireland sites designated for offshore ornithological features.
- 4.4.4. It is also pertinent to note that the Isle of Man (IoM) is not covered by the Habitats Regulations but is part of the Ramsar Convention. At the point of DCO application, the Applicant's HRA documentation did not address Ramsar sites located on the IoM. The Applicant's Addendum [\[REP5-005\]](#) to the HRA Stage 2 SPA Report [then [\[APP-098\]](#), revised in [\[REP6-066\]](#) provided at Deadline (D) 5 presented

assessments of ornithological and non-ornithological features of the IoM Ballaugh Curragh Ramsar site and other proposed (p) Ramsar sites located on the IoM.

- 4.4.5. The Applicant's assessment identified that with respect to marine mammals the Proposed Development would give rise to LSE, either alone or in combination with other projects or plans, on one or more qualifying features of 33 European sites (12 sites in the UK and Ireland, 4 sites in the Republic of Ireland and 17 sites in France) (see Tables 1.29 to 1.56 in [\[APP-099\]](#), revised in [\[REP6-067\]](#)).
- 4.4.6. With respect to Annex II diadromous fish species, the Applicant concluded LSE could not be discounted for nine SACs in the UK (see Tables 1.18 to 1.26 in [\[APP-099\]](#), revised in [\[REP6-067\]](#)).
- 4.4.7. Lastly, with respect to birds, the Applicant reported that LSE could not be discounted for 30 SPAs and three Ramsar sites in the UK and Ireland, and 6 SPAs in the Republic of Ireland (see Tables 1.57 to 1.109 in [\[APP-099\]](#), revised in [\[REP6-067\]](#)).
- 4.4.8. The Applicant's screening conclusions in respect of Annex II diadromous fish and marine mammals were not disputed during the Examination.
- 4.4.9. However, Natural England [\[RR-026\]](#), [\[REP1-053\]](#) and NRW [\[RR-027\]](#), [\[REP2-026\]](#) considered that Liverpool Bay SPA should also have been identified for inclusion within the Applicant's stage 1 and 2 assessments in respect of ornithology. At D5, the applicant presented Stage 1 and 2 assessments for the Liverpool Bay SPA [\[REP5-036\]](#). Potential LSEs were identified for the red-throated diver, common scoter and waterbird assemblage qualifying features of that SPA.
- 4.4.10. Aside from the Liverpool Bay SPA, no additional UK European sites were identified by IPs for inclusion within the screening assessment during the Examination.
- 4.4.11. The IoM government also subsequently confirmed it was content that the IoM Ramsar sites had been appropriately considered [\[REP4-039\]](#).
- 4.4.12. The ExA is satisfied that all relevant European sites and potential impact pathways have been identified and assessed by the Applicant. Following the inclusion of Liverpool Bay SPA, the ExA is content that the conclusions of the Applicant's LSE assessment are agreed by the ANCBs.

## **4.5. SUMMARY OF FINDINGS IN RELATION TO ADVERSE EFFECTS ON INTEGRITY**

- 4.5.1. The European sites screened positively for LSE were assessed by the Applicant to determine if they could be subject to adverse effects on integrity (AEol) from the proposed development alone or in combination with other projects or plans. The Applicant's assessment of effects were summarised in Table 1.187 of [\[APP-097\]](#) for SACs and Table 1.86 of [\[APP-098\]](#), revised in [\[REP6-066\]](#) for SPA and Ramsar sites (and [\[REP5-036\]](#) for the Liverpool Bay SPA).
- 4.5.2. The Applicant concluded that the proposed development would not result in AEol of any of the European sites assessed.
- 4.5.3. At the close of the Examination, the Applicant's conclusions had not been disputed by any IP in relation to the Annex II diadromous fish and marine mammal sites and features, although Natural England and NRW did not initially confirm [\[RR-026\]](#)

[RR-027] that they were able to rule out AEol to the English and Welsh sites and features for marine mammals.

- 4.5.4. Nonetheless, as noted in the HRA in [Appendix C](#) of this Report, NRW subsequently confirmed at D4 [\[REP4-044\]](#) that AEol alone and in combination can be excluded for all the marine mammal qualifying features of the SACs within its remit, provided the mitigation measures outlined by the Applicant are secured. At D5, Natural England also confirmed [\[REP5-080\]](#) that AEol alone and in-combination can be excluded for the marine mammal qualifying features of the SACs within its remit, while JNCC confirmed the same at D3 [\[REP3-035\]](#) on the basis that the measures in the outline Marine Mammal Mitigation Protocol and outline Underwear Sound Management Strategy are sufficient to mitigate the potential impacts.
- 4.5.5. Providing the proposed mitigation measures are adhered to, the ExA concludes that AEol from the proposed development can be excluded, both alone and in combination with other plans or projects, on all diadromous fish and marine mammal SAC features.
- 4.5.6. With regard to ornithology, the Applicant concluded that the Proposed Development would not adversely affect the integrity of any of the European sites and features assessed within the UK national site network (NSN), either alone or in combination with other projects or plans. The applicant also concluded there would be no AEol on all non-UK sites.
- 4.5.7. A number of methodological concerns regarding the offshore ornithology assessment were raised during the Examination by Natural England, NRW and JNCC, but were subsequently resolved with all the ANCBs concluding that AEol can be ruled out for all English and Welsh SPAs for all impact pathways due to the project alone and in combination with other projects or plans [\[REP5-079\]](#), [\[AS-012\]](#) and [\[REP5-067\]](#). This included agreement with the conclusion of no AEol on the red-throated diver and common scoter qualifying features of the Liverpool Bay SPA [\[REP6-101\]](#), [\[REP6-105\]](#), [\[REP3-035\]](#).
- 4.5.8. Methodological concerns raised by the RSPB were, however, unresolved at the end of the Examination [\[REP6-086\]](#) and it did not agree there would be no AEol on great black-backed gull of the Isles of Scilly SPA or Manx shearwater of the following sites:
- Irish Sea Front SPA
  - Copeland Islands SPA
  - Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA
  - Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a Moroedd Penfro SPA
  - Rum SPA
  - Isles of Scilly SPA
  - St Kilda SPA
- 4.5.9. The RSPB also did not agree that AEol could be ruled out for “a range of species/ SPA combinations” (not specified) resulting from collision impacts and distribution change, from the proposed development in combination with other plans or projects [\[REP1-057\]](#).
- 4.5.10. Due to resource constraints, the RSPB noted it was unable to review and conclude on the information provided by the Applicant at D5 to address these issues [\[REP5-032\]](#) and [\[REP5-035\]](#).

- 4.5.11. Having had regard to the submissions made, the ExA considers it unfortunate that the RSPB was unable to fully clarify its position at the end of the Examination, but it is nonetheless satisfied with the assessment of survival rates and collision risk and displacement in-combination effects to great black-backed gull of the Isles of Scilly SPA. The ExA is also satisfied with the baseline characterisation for Manx shearwater of the SPAs noted above particularly given the RSPB acknowledgement [\[REP6-086\]](#) that this concern relates to wider industry limitations rather than a project specific issue.
- 4.5.12. In terms of all other sites designated for offshore ornithology, the ExA is satisfied that the mitigation measures required to avoid AEol are adequately detailed through relevant plans (for example the outline Offshore Environmental Management Plan [\[REP4-018\]](#), the Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels' [\[APP-070\]](#), revised in [\[REP5-046\]](#) and the Outline Vessel Traffic Management Plan [\[REP2-017\]](#), now [\[REP6-055\]](#)) and secured through the draft Development Consent Order (DCO).
- 4.5.13. The ExA notes that a number of the European sites with offshore ornithological features for which it considers there to be a LSE are located within Scottish and Northern Irish waters. As detailed in [Appendix C](#) of this Report, NatureScot and Department of Agriculture Environment and Rural Affairs of Northern Ireland did not engage with the Examination, therefore the ExA does not have their views on impacts on the European sites for which they are responsible.
- 4.5.14. However, on the basis of the information submitted and considering the pathways assessed, the ExA is content that the proposed development would not result in further deterioration of, or undermine the conservation objectives of, any European site with offshore ornithological qualifying feature(s) and that an AEol from the project alone or in combination can be excluded.

## **4.6. HRA CONCLUSIONS**

- 4.6.1. The European sites and qualifying features for which LSE were identified were not disputed by any party at the end of the Examination. The ExA is satisfied that the correct European sites and qualifying features were identified for assessment, and that all potential impacts that could give rise to significant effects were identified.
- 4.6.2. In summary, the ExA's findings are that, subject to the mitigation measures that would be secured in the recommended DCO, AEol from the proposed development alone or in-combination with other projects or plans can be excluded from the impact-effect pathways for all European sites within the UK NSN.
- 4.6.3. The ExA considers that there is sufficient information before the SoS to undertake an AA to fulfil the requirements of the Habitats Regulations. However, given the amount of HRA information submitted by both the Applicant and ANCBs following publication of the RIES, the SoS may wish to undertake further consultation to fulfil the duties under Regulation 63(3) of the Habitats Regulations and Regulation 28(4) of the Offshore Habitats Regulations.



## **5. CONCLUSION ON THE CASE FOR DEVELOPMENT CONSENT**

### **5.1. INTRODUCTION**

- 5.1.1. This Chapter provides an evaluation of the planning merits of the Proposed Development. It does so in the light of the legal and policy context set out in [Chapter 2](#) and [Appendix A4](#).
- 5.1.2. The Examining Authority (ExA) has taken into account all relevant representations, written representations, responses to the Examining Authority's written and oral questions and Rule 17 requests for further information, as well as all other representations made during the course of the Examination. The Local Impact Report (LIR) from the Isle of Man Government Territorial Sea Committee (IoM TSC), made as if it were a UK local authority, has also been taken into account.
- 5.1.3. The ExA confirms that the Applicant has complied with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations). The Environmental Statement (ES) and associated information submitted at the time of making the Application (and subsequently during the Examination) provide an adequate assessment of the environmental effects of the Proposed Development, including the assessment of cumulative effects (CEA). The ExA is satisfied that the ES is sufficient to enable the Secretary of State (SoS) to take a decision in compliance with the EIA Regulations.

### **5.2. THE PLANNING BALANCE**

#### **THE PRINCIPLE OF DEVELOPMENT**

- 5.2.1. National Policy Statement (NPS) EN-1 confirms the presumption in favour of granting consent for applications for nationally significant energy generation projects, for which there is an urgent need to assist with the transition to a low carbon Net Zero economy, reducing greenhouse gas (GHG) emissions, and in contributing to UK energy security.
- 5.2.2. The ExA concludes that the Applicant has considered all reasonable alternatives and as refined represents the most appropriate design having regard to environmental and technical constraints, and is considered to be proportionate in the context of NPS EN-1 paragraph 4.3.22.
- 5.2.3. The ExA gives very great positive weight in the final planning balance to the contribution that the Proposed Development would make to satisfying the urgent need for renewable energy infrastructure.

#### **ENVIRONMENTAL EFFECTS**

##### **Aviation and radar**

- 5.2.4. The ExA is satisfied with the consideration of potential effects to aviation and radar at civil and military aerodromes, in accordance with section 5.5 of NPS EN-1. It is acknowledged that the parties continue to engage to identify realistic and pragmatic solutions. Whilst the ExA accepts that effects on high frequency communications were not scoped into the ES and there is no specific reference in the NPS, the ExA is also satisfied with the Applicant's response to this additional issue.

- 5.2.5. Without mitigation, the ExA concludes that effects on the affected sites would be moderate adverse (significant in EIA terms). It is expected that the SoS will be provided with updated information regarding ongoing assessments, potential mitigation measures, amendments to requirements, and commercial agreements. Nonetheless, even if such matters have not been concluded by the time the SoS makes a decision on the Application, the ExA is satisfied that the recommended Grampian type requirements would appropriately secure any required mitigation.
- 5.2.6. The ExA attributes moderate negative weight to aviation and radar matters at the close of the Examination. However, in the event that BAE and the DIO are satisfied with the requirements following their review of the assessments and their safeguarding objections are withdrawn, the ExA would reduce this to a little negative weight in the planning balance.

### **Commercial fisheries**

- 5.2.7. The ExA is satisfied that the Applicant has complied with the obligations of NPS EN-3 section 2.8 regarding commercial fisheries. The ExA accepts the Applicant's commitments to mitigation of effects, post-consent monitoring, and adaptive management as being reasonable and proportionate. The ExA is also satisfied that potential socio-economic effects have been adequately considered.
- 5.2.8. The ExA concludes that the residual effect to the Scottish west coast scallop vessels of restricted access or of loss of queen scallop fishing ground for the project alone and cumulatively with the proposed Mona offshore wind farm (OWF) would be of moderate adverse significance. Otherwise, the ExA agrees that the significance of other adverse effects on commercial fisheries would be negligible.
- 5.2.9. The ExA attributes moderate negative weight to commercial fisheries matters in the planning balance.

### **Fish and shellfish ecology**

- 5.2.10. The ExA is satisfied that the effects of the Proposed Development on fish and shellfish ecology including to spawning and nursery grounds and possible impacts arising from the effects of underwater noise have been adequately assessed and meets the requirements of NPS EN-1 and NPS EN-3.
- 5.2.11. The ExA agrees that the impacts on fish and shellfish ecology for the Proposed Development alone and cumulatively would be predominantly minor adverse, with some negligible impacts. However, the ExA considers that there is the potential for moderate adverse effects on herring and cod during peak spawning periods from underwater construction noise associated with piling activities from the project alone and cumulatively. With the implementation of secondary mitigation, the ExA is satisfied that the effects could be reduced to residual minor adverse and not significant in EIA terms.
- 5.2.12. The ExA attributes a little negative weight to fish and shellfish ecology matters in the planning balance.

### **Marine mammals**

- 5.2.13. The ExA concludes that subject to the implementation of identified mitigation there is potential for minor adverse effects on marine mammals as a result of the Proposed Development alone. The ExA notes that for bottlenose dolphin there remains potential for a significant cumulative effect from underwater noise during

piling but considers that the adoption by the Applicant of measures within the recent DEFRA policy, 'Reducing Marine Noise' (January 2025) reduces the likelihood of a such a significant impact arising.

5.2.14. The ExA considers that the case has been made for the inclusion of low order unexploded ordnance clearance activities within the DMLs and is satisfied that the management of construction would reasonably minimise significant effects on marine mammals. Further marine mammal monitoring measures are unnecessary. The ExA is content that the provisions of NPS EN-3 have been satisfied and that the minor adverse residual effects are not significant in EIA terms.

5.2.15. The ExA attributes a little negative weight to marine mammals matters in the planning balance.

### **Ornithology**

5.2.16. The ExA is satisfied that the Applicant has undertaken a robust assessment of impacts and potential effects to birds in accordance with NPS EN-1 and NPS EN-3 and is satisfied that all relevant legislation and other national policies and strategies are complied with.

5.2.17. The majority of concerns from the Statutory Nature Conservation Bodies related to methodological issues, which were largely resolved by the close of the Examination. The ExA is satisfied with the Applicant's conclusion maintained at the end of the Examination that residual effects of the Proposed Development alone and cumulatively with other projects would not be significant in EIA terms and agrees that no additional mitigation or monitoring is necessary.

5.2.18. The ExA attributes a little negative weight to the ornithological matters in the planning balance.

### **Physical processes and benthic ecology**

5.2.19. Not all matters related to benthic subtidal ecology and physical processes were agreed between the Applicant and Natural England at the close of the Examination. However, the ExA appreciates the MMO's confirmation that all concerns (with the exception of chemicals risk) have been suitably addressed.

5.2.20. The ExA considers that the methods of construction would reasonably minimise the potential for impact on the physical environment and that the Proposed Development has been designed considering sensitive subtidal environmental aspects, as required by NPS EN-3. Overall, the ExA concludes that it is satisfied with the Applicant's assessment of physical processes, and that subject to the amendment of DML conditions in the recommended DCO adverse effects on benthic subtidal ecology are considered to be minor adverse and not significant.

5.2.21. Given the possibility that the colonisation of artificial structures may also have some positive ecological effects, the ExA considers that there is no net level of harm to benthic subtidal ecology. The matter would therefore be neutral in the planning balance and as such would not weigh for or against granting of the Order.

### **Shipping and navigation**

5.2.22. The ExA is satisfied that subject to mitigation commitments secured by the recommended DCO that the Proposed Development would not present unacceptable risk to or unacceptable interference with shipping and navigation, or to

human health and public safety, and therefore the policy obligations and tests in NPS EN-1, NPS EN-3, NPS for Ports and relevant marine policy have been complied with.

- 5.2.23. Based on the moderate adverse effects of additional passage durations in certain weather conditions for ferry service operators both alone and cumulatively with other projects, the ExA attributes moderate negative weight in the planning balance to shipping and navigation matters.
- 5.2.24. However, in the event that the SoS is satisfied at the time of decision-making that commercial side agreements with the IoM Steam Packet Company and Stena Line have been concluded to mutual satisfaction, the ExA's recommendation on weighting for shipping and navigation matters would be decreased from moderate negative weight to a little negative weight in the planning balance.

### **Other offshore infrastructure and other sea users**

- 5.2.25. The ExA agrees that effects on existing oil and gas infrastructure would be minor adverse overall and not significant, taking account of the likely short-term overlap of construction of the Proposed Development with Harbour Energy's Millom Field decommissioning. The ExA is satisfied that, in respect of both marine access and helicopter flights, there would not be intolerable risks to safety.
- 5.2.26. The Ørsted IPs made extensive representations regarding the matter of wake loss to their existing operational Irish Sea OWFs, and the ExA agrees that NPS EN-3 paragraph 2.8.197 applies in this case. Whilst the Applicant did not submit an assessment of wake effects, the ExA acknowledges the current lack of policy and guidance on the production of such an assessment. The ExA considers that the Wood Thilsted report commissioned by the Ørsted IPs, together with the Applicant's submissions on GHG effects, is sufficient to inform the SoS on the potential effects. Both parties have had adequate opportunity to comment on these submissions.
- 5.2.27. The ExA notes that a government consultation on the matter of wake effects in relation to an updated NPS EN-3 was launched after the close of the Examination and therefore the parties have not had the opportunity to comment on it.
- 5.2.28. The effects of loss of energy generation from the Ørsted IPs's OWFs would be very limited in the context of the much greater levels of renewable energy that would be generated by the Proposed Development. Furthermore, the ExA is not persuaded by arguments made by the Ørsted IPs relating to the consequence of wake effects on future viability. No clear evidence was provided that the predicted wake loss effects would seriously impact future repowering of existing OWFs. There are a range of different factors involved in decisions on whether to extend the life of an existing OWF, and such commercial decisions are outwith the Examination.
- 5.2.29. Overall, in relation to issues raised by both Harbour Energy and the Ørsted IPs, the ExA considers that a pragmatic approach could be employed by the SoS in accordance with paragraph 2.8.342 of NPS EN-3. The ExA is satisfied that appropriate mitigation has already been designed in by a reduction in the array area thereby increasing the distance from existing offshore infrastructure. The ExA does not consider that any additional measures, including protective provisions, are reasonable or necessary.
- 5.2.30. The ExA attributes a little negative weight to this matter of other offshore infrastructure in the planning balance.

## Other considerations

### *Historic environment*

- 5.2.31. The ExA accepts the Applicant's assessment of no significant residual effects to marine archaeology subject to mitigation secured within the recommended DCO. This includes adoption of a protocol for archaeological discoveries and the ExA recognises the beneficial effects of archaeological investigation and data sharing that would result have been taken into account in that assessment.
- 5.2.32. The setting of terrestrial heritage assets has also been considered by the ExA. The ExA cannot make informed conclusions on the level of cumulative harm to the setting of IoM heritage assets that would result from the proposed Mooir Vannin OWF given that the details are not before the ExA. The ExA is satisfied that all other cumulative effects, including with Morecambe OWF and the transmission assets, have been adequately assessed. Overall, the ExA finds that there would be no harm to the setting of terrestrial IoM and English designated heritage assets (including World Heritage Sites), and to non-designated heritage assets either alone or cumulatively largely given the distances from such assets.
- 5.2.33. The SoS can be satisfied that the policy tests within section 5.9 of NPS EN-1 have been met, and that the submission enables regard to be had to Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010. The overall level of harm to heritage assets would be neutral and therefore a heritage balance against the public benefits of the Proposed Development is unnecessary.
- 5.2.34. The ExA considers that both offshore and onshore historic environment matters are neutral in the planning balance and do not weigh for or against making of a DCO.

### *Human health*

- 5.2.35. The ExA accepts the Applicant's assessment that there would be no likely significant adverse effects to human health and quality of life including as inter-related to other environmental matters, including navigational risk to shipping, and finds that policy tests have been satisfied in accordance with NPS EN-1 section 4.4.
- 5.2.36. The ExA finds that human health matters are neutral in the planning balance and do not weigh for or against making of a DCO.

### *Seascape, landscape and visual resources*

- 5.2.37. The ExA has had regard to the setting of and views from nationally designated landscapes in accordance with paragraph 5.10.34 of NPS EN-1. It recommends to the SoS that there is sufficient information to conclude on its duty to Protected Landscapes at s245 of the Levelling up and Regeneration Act 2023.
- 5.2.38. The ExA highlights that significant negative effects on seascape, landscape and visual resources from a number of IoM viewpoints would only arise as a result of cumulative effects with the Mooir Vannin OWF proposal, however this was unsubmitted at the close of the Examination and there is a lack of information before the ExA on that project. There are a small number of locations where effects would be significant in EIA terms in the operational phase, but for the majority of receptors such effects would be minor and not significant.
- 5.2.39. Overall, the ExA finds that seascape, landscape and visual effects carry a little negative weight in the planning balance.



#### *Social and economic*

- 5.2.40. In accordance with NPS EN-1 paragraphs 5.13.10 and 5.13.11, limited weight has been given to assertions of socio-economic impacts not supported by evidence. The Applicant is proposing to mitigate impacts relating to shipping and navigation through commercial side agreements not yet concluded at the close of the Examination. Other than this, the ExA agrees that there would no other likely significant adverse socio-economic effects, and that there would be moderate beneficial employment and Gross Value Added impact in North Wales.
- 5.2.41. Overall the ExA finds that socio-economic matters carry a little positive weight in the planning balance.

#### **Good design**

- 5.2.42. Section 4.7 of NPS EN-1 provides criteria for good design for energy infrastructure, and this is also reflected in section 2.5 of NPS EN-3. Good design goes beyond aesthetic considerations. Opportunities for co-existence with other marine uses has been appropriately considered, and the design of the Proposed Development has been amended in various ways to reduce effects. This includes the increase in the distance from existing offshore infrastructure (and increase the navigable gap), the introduction of a scallop fishery structures exclusion zone, and increase in minimum lower blade tip height above sea surface to minimise effects on bird flight. The ExA concludes that the Applicant has met the requirements of NPS EN-1 section 4.7 and EN-3 section 2.5.

#### **Habitats Regulations Assessment**

- 5.2.43. The SoS is the competent authority under the Habitats Regulations, so will make the definitive assessment. However, the ExA's findings are that, subject to the mitigation measures secured in the recommended DCO, adverse effects on integrity from the Proposed Development alone or in combination with other projects or plans can be excluded from the impact-effect pathways for all European sites within the UK National Site Network. The SoS has sufficient information to undertake an appropriate assessment to fulfil the requirements of the Habitats Regulations.

### **5.3. FINDINGS AND CONCLUSIONS ON THE PLANNING BALANCE**

- 5.3.1. NPS EN-1 paragraphs 3.2.6 to 3.2.8 set out the starting point that the need for energy infrastructure is urgent and that substantial weight should be given to this need. The urgent need is reinforced by the legally binding target of Net Zero by 2050. The ExA considers that the Proposed Development meets the need as established in NPS EN-1 and EN-3 and satisfies the tests of s104(2) and s104(3) of the Planning Act 2008 (PA2008) and accordingly should be determined as such. The need for the scheme must be given very great positive weight in the planning balance.
- 5.3.2. For the reasons set out in Chapter 3 of this Report, the ExA has not identified any topic areas where great or very great negative weight in the planning balance applies. Table 8 below summarises the ExA's findings on each issue.

**Table 8: Summary of findings in the planning balance**

| Issue                                       | Finding  | Weighting                                                                                            | Section |
|---------------------------------------------|----------|------------------------------------------------------------------------------------------------------|---------|
| Need                                        | Positive | Very great                                                                                           | 3.2     |
| Social and economic                         | Positive | A little                                                                                             | 3.13    |
| Commercial fisheries                        | Negative | Moderate                                                                                             | 3.6     |
| Aviation and radar                          | Negative | Moderate<br>Reduced to a little if agreement reached with the relevant interested parties            | 3.5     |
| Shipping and navigation                     | Negative | Moderate<br>Reduced to a little if commercial agreement reached with the relevant interested parties | 3.11    |
| Fish and shellfish ecology                  | Negative | A little                                                                                             | 3.7     |
| Marine mammals                              | Negative | A little                                                                                             | 3.8     |
| Ornithology                                 | Negative | A little                                                                                             | 3.9     |
| Other offshore infrastructure and sea users | Negative | A little                                                                                             | 3.11    |
| Seascape, landscape and visual              | Negative | A little                                                                                             | 3.13    |
| Physical processes and benthic ecology      | Neutral  | -                                                                                                    | 3.10    |
| Historic environment                        | Neutral  | -                                                                                                    | 3.13    |
| Human health                                | Neutral  | -                                                                                                    | 3.13    |

5.3.60. S104(2) and s104(3) of PA2008 require the SoS to decide the application in accordance with any NPS and having regard to any LIR and any other matters which the SoS thinks are important and relevant to the decision, except to the extent that one or more of subsections (4) to (8) apply. The ExA is satisfied that no such matters in subsections (4) to (8) apply.

5.3.61. In order for the Proposed Development to fail s104(7) of the PA2008, the identified moderate and a little negative weight attached to the elements of the Proposed Development identified in Table 8 above would, either individually or cumulatively, need to be of such importance that they are capable of outweighing the very great positive weight to be attached to the need for the Proposed Development as identified in NPS EN-1, and being of Critical National Priority (CNP) status as identified in NPS EN-1.

- 5.3.62. The ExA highlights that it is possible for the moderate negative weight attached to the matters of aviation and radar, and shipping and navigation, to be reduced to a little negative weight if the relevant IPs can agree the matters raised prior to the SoS making a decision. Nonetheless the ExA considers that the residual effects and the harm, even if considered as moderate in the planning balance, and when considered cumulatively, would not be capable of outweighing the very great positive weight attached to the need for the Proposed Development as set out in NPS EN-1 and EN-3.
- 5.3.63. The ExA concludes that, on the planning merits, the adverse effects would not outweigh the benefits of the Proposed Development. There is a convincing case for development consent to be granted, and the ExA considers that the SoS is able to determine the Proposed Development in accordance with s104(2) and s104(3) of PA2008.

#### **Critical national priority considerations**

- 5.3.64. Section 4.2 of NPS EN-1 sets out the starting point that the application of CNP policy follows the overarching need case, to which substantial weight should be given. It follows the normal consideration of the impacts of the project, and the application of the mitigation hierarchy to any residual impacts identified (as well as any other legal and regulatory requirements).
- 5.3.65. The ExA considers that the residual impacts as identified in Chapter 3 are capable of being addressed by application of mitigation as secured in the recommended DCO and is satisfied that the mitigation hierarchy has been fully explored in relation to all topics. The ExA has concluded overall that the urgent need for the Proposed Development outweighs the negative impacts identified. Given that the ExA's recommendation is already in favour of the Proposed Development, it is not necessary to apply the further tests set out in NPS EN-1 in relation to CNP.

## 6. DRAFT DEVELOPMENT CONSENT ORDER AND RELATED MATTERS

### 6.1. INTRODUCTION

- 6.1.1. This Chapter describes the draft Development Consent Order (DCO) as applied for and the changes made to it during the Examination. It also describes matters that were not resolved at the close of the Examination, the Examining Authority's (ExA) recommendations on those matters and the corresponding changes that would result, as proposed in the ExA's draft recommended DCO which can be found at [Appendix D](#) of this Recommendation.
- 6.1.2. The application draft DCO [\[APP-005\]](#) and the Explanatory Memorandum (EM) [\[APP-006\]](#) were submitted as part of the Application for development consent.
- 6.1.3. The EM explains the purpose and effects of each article and schedule of the draft DCO. It also identifies and explains departures from the now-repealed Infrastructure Planning (Model Provisions) (England and Wales) Order 2009 (the model provisions). The EM describes how the drafting of the draft DCO has drawn on drafting used in other made Orders under the Planning Act 2008 (PA2008). The submission version of the draft DCO [\[APP-005\]](#) and subsequent iterations are in the form of a statutory instrument as required by s117(4) of PA2008.
- 6.1.4. Seven revisions of the draft DCO were submitted during the Examination, each with a tracked changes version and a Schedule of Changes document with each copy. The final version (F09) was submitted on 10 March 2025. Unless otherwise stated, all references to the draft DCO in this Chapter are to the Applicant's final draft DCO [\[REP7-007\]](#).

### 6.2. THE ORDER AS APPLIED FOR

- 6.2.1. The Applicant's final draft DCO [\[REP7-007\]](#) is structured as follows:
- Part 1 (Preliminary):
    - Article 1 sets out how the Order may be cited and when it comes into force.
    - Article 2 defines the meanings of various terms used in the Order
  - Part 2 (Principal Powers):
    - Articles 3 and 4 provide development consent for the Proposed Development and allow it to be constructed and operated
    - Article 5 grants the deemed marine licences (DMLs) included in schedules 3 and 4 of the Order under Part 4 of the Marine and Coastal Access Act 2009 (MCAA 2009)
    - Article 6 allows the Proposed Development to be maintained
    - Article 7 sets out who has the benefit of the powers of the Order and how those powers can be transferred
  - Part 3 (Miscellaneous and General):
    - Articles 8 to 12 provide various general provisions, specifically abatement of works abandoned or decayed, saving provisions for Trinity House, a provision in respect of Crown rights, and procedures regarding certification of documents and serving of notices

- 6.2.2. There are five schedules to the Order:
- Schedule 1 is split into two parts and provides a description of the Proposed Development and the grid coordinates for the proposed works, as well as a description of the ancillary works
  - Schedule 2 sets out the 12 requirements (R) that control the powers contained in the various articles
  - Schedules 3 and 4 include the two DMLs and their respective conditions
  - Schedule 5 lists the document and plans to be certified under article 11 (Certification of plans, etc) by the SoS.

### 6.3. EXAMINATION AND EVOLUTION OF THE DEVELOPMENT CONSENT ORDER

- 6.3.1. The Application included a draft DCO [\[APP-005\]](#) and an EM [\[APP-006\]](#) when it submitted the application. During the pre-examination period, the Applicant submitted an amended version of the draft DCO [\[AS-003\]](#) and EM [\[AS-005\]](#) in response to [Section 51 advice](#) issued by The Planning Inspectorate at acceptance of the application to correct a few minor errors and inconsistencies in the documents.
- 6.3.2. During the Examination, the ExA examined the specific provisions of the draft DCO at the following issue specific hearings (ISH):
- 1) ISH1 on 10 September 2024 [\[EV2-001\]](#)
  - 2) ISH2 on 27 November 2024 [\[EV5-012\]](#)
  - 3) ISH3 on 12 February 2025 [\[EV6-009\]](#)
- 6.3.3. The ExA also examined the provisions of the draft DCO through the following rounds of written questions (ExQ):
- 1) ExQ1 issued on 29 October 2024 [\[PD-004\]](#)
  - 2) ExQ2 issued on 19 December 2024 [\[PD-009\]](#)
  - 3) Rule 17 issued on 04 March 2025 [\[PD-012\]](#)
- 6.3.4. The Applicant updated the draft DCO at each deadline during examination responding to issues raised in written submissions, ExQs and as a consequence of the hearing process. As previously mentioned, at each revision during the Examination the Applicant supplied a clean copy of the draft DCO, a copy showing changes from the previous version as tracked changes and a schedule of changes made to the draft DCO. The versions of the draft DCO submitted by the Applicant are summarised in Table 9, below.

**Table 9: Draft Development Consent Order documentation submitted into the Examination**

| Draft DCO Version | Deadline                                  | Examination Library References                                                                                                    |
|-------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| -                 | Submission at Acceptance<br>(17 May 2024) | Draft DCO <a href="#">[APP-005]</a><br>EM <a href="#">[APP-006]</a>                                                               |
| F02               | Pre-Examination<br>(23 July 2024)         | Draft DCO (clean) <a href="#">[AS-003]</a><br>Draft DCO (tracked) <a href="#">[AS-004]</a><br>EM (clean) <a href="#">[AS-005]</a> |



|     |                                  |                                                                                                                                                                                                                                                                                                 |
|-----|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     |                                  | EM (tracked <a href="#">[AS-006]</a> )                                                                                                                                                                                                                                                          |
| F03 | Deadline 1<br>(3 October 2024)   | Draft DCO (clean) <a href="#">[REP1-021]</a><br>Draft DCO (tracked) <a href="#">[REP1-022]</a><br>EM (clean) <a href="#">[REP1-023]</a><br>EM (tracked <a href="#">[REP1-024]</a> )<br>Schedule of changes <a href="#">[REP1-025]</a>                                                           |
| F04 | Deadline 2<br>(22 October 2024)  | Draft DCO (clean) <a href="#">[REP2-011]</a><br>Draft DCO (tracked) <a href="#">[REP2-002]</a><br>EM (not provided at Deadline 2)<br>Schedule of changes <a href="#">[REP2-012]</a>                                                                                                             |
| F05 | Deadline 3<br>(12 November 2024) | Draft DCO (clean) <a href="#">[REP3-013]</a><br>Draft DCO (tracked) <a href="#">[REP3-014]</a><br>EM (clean) <a href="#">[REP3-015]</a><br>EM (tracked <a href="#">[REP3-016]</a> )<br>Schedule of changes <a href="#">[REP3-017]</a>                                                           |
| F06 | Deadline 4<br>(10 December 2024) | Draft DCO (clean) <a href="#">[REP4-013]</a><br>Draft DCO (tracked) <a href="#">[REP4-014]</a><br>EM (not provided at Deadline 4)<br>Schedule of changes <a href="#">[REP4-015]</a>                                                                                                             |
| F07 | Deadline 5<br>(16 January 2025)  | Draft DCO (clean) <a href="#">[REP5-017]</a><br>Draft DCO (tracked) <a href="#">[REP5-018]</a><br>EM (clean) <a href="#">[REP5-044]</a><br>EM (tracked <a href="#">[REP5-045]</a> )<br>Schedule of changes <a href="#">[REP5-019]</a>                                                           |
| F08 | Deadline 6<br>(27 February 2025) | Draft DCO (clean) <a href="#">[REP6-017]</a><br>Draft DCO (tracked) <a href="#">[REP6-018]</a><br>EM (clean) <a href="#">[REP6-019]</a><br>EM (tracked <a href="#">[REP6-020]</a> )<br>Schedule of changes <a href="#">[REP6-021]</a><br>Draft DCO validation report <a href="#">[REP6-022]</a> |
| F09 | Deadline 7<br>(10 March 2025)    | Draft DCO (clean) <a href="#">[REP7-007]</a><br>Draft DCO (tracked) <a href="#">[REP7-006]</a><br>EM (clean) <a href="#">[REP7-008]</a><br>EM (tracked <a href="#">[REP7-009]</a> )<br>Schedule of changes <a href="#">[REP7-010]</a><br>Draft DCO validation report <a href="#">[REP7-011]</a> |

### Notable Changes to the Draft Development Consent Order during the Examination

- 6.3.5. The Applicant's final Schedule of Changes to the draft DCO [\[REP7-010\]](#) sets out all of the changes made to the draft DCO between the submission and final versions, together with the rationale for each change.

6.3.6.

The ExA does not report on every change made to the draft DCO during the Examination, as some were minor changes resulting from typographical or grammatical errors or made to improve clarity or consistency. In the interests of conciseness, the ExA focuses on the notable changes made to the draft DCO in Table 10 below. Since only minor changes were made in Revision F02 (which was responding to s51 advice in the pre-examination period), the summary in Table 10 begins with Revision F03 of the draft DCO [\[REP1-021\]](#).

**Table 10: Notable changes made to the draft Development Consent Order**

| Version/ Deadline                            | Notable changes made                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F03 Deadline 1<br><a href="#">[REP1-021]</a> | <ul style="list-style-type: none"> <li>▪ Deletion of article 13 relating to rights of appeal, to reflect relevant representation (RR) comments from the Marine Management Organisation (MMO) that such enhanced appeal provisions are not available to other marine licence holders.</li> <li>▪ Inclusion of additional information into the Design Parameters in schedule 2 (R2) and schedules 3 and 4 (condition 10), including maximum rotor swept area and volume of scour protection, in response to ISH1 Action 2 and RR from Natural England.</li> <li>▪ Amendment to schedules 3 and 4 (paragraph 2(g)) to reflect the disposal of a reduced amount of inert material due to a decrease in sandwave clearance volumes.</li> <li>▪ Amendment to schedules 3 and 4 (condition 15, sub paragraphs (7)(a) and (8)) to increase the notice period of construction vessel routes to the Kingfisher Information Service of Seafish and to mariners from 7 to 10 days.</li> <li>▪ Amendment to schedules 3 and 4 (condition 20(1)(d)) to include a new requirement for piling methodology to be specified and submitted to the MMO for approval as part of the construction method statement.</li> <li>▪ Amendment to terminology in schedules 3 and 4 (condition 22(1)) to ensure consistency with terminology used in condition 23(1), in response to ISH1 Action 8.</li> </ul> |
| F04 Deadline 2<br><a href="#">[REP2-011]</a> | <ul style="list-style-type: none"> <li>▪ Amendment to schedules 3 and 4 (paragraph 1) to remove reference to the term '<i>business day</i>', provide explicit wording for the term '<i>layout principles</i>', and address errors in the postal addresses for various statutory undertakers.</li> <li>▪ Amendment to schedules 3 and 4 (paragraph 9) in relation to the process for amendments or variations, to reflect comments from the MMO.</li> <li>▪ Deletion of the word '<i>substantially</i>' from schedules 3 and 4 (condition 13(3)), to reflect comments from the MMO that the word is a surplus requirement.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| Version/ Deadline                                    | Notable changes made                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                      | <ul style="list-style-type: none"> <li>Further amendment to schedules 3 and 4 (condition 15, sub paragraphs (7)(a) and (8)) to increase the notice period of construction vessel routes to the Kingfisher Information Service of Seafish and to mariners from 10 to 14 days, to reflect comments from the Maritime and Coastguard Agency and Trinity House.</li> <li>Insertion of additional words into schedules 3 and 4 (condition 20(1)(a)) to secure the layout principles set out within Environmental Statement - Volume 1, Chapter 3 Project description <a href="#">[APP-010]</a>.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>F05 Deadline 3<br/><a href="#">[REP3-013]</a></p> | <ul style="list-style-type: none"> <li>Amendment to the definition of '<i>maintain</i>' in article 2 and in schedules 3 and 4 (paragraph 1) in response to comments from the MMO and the ExA's ExQ1, DCO 1.1.</li> <li>Replacement of the word '<i>shall</i>' with '<i>must</i>' in article 7(4) with regard to consultation requirements for transfer of benefit proposals. Additional wording also added to article 7(11) to reflect established administrative practice where a transfer of benefit has taken place, in response to the ExA's ExQ1, DCO 1.2.</li> <li>Inclusion of additional information into the Design Parameters in schedule 2 (R2) and schedules 3 and 4 (condition 10), including the maximum hammer energies for pile driven foundations, the maximum number of pin piles, the maximum area of cable protection, the maximum volume of cable protection and the maximum volume of seabed material that could be used as ballast in gravity based foundations in response to the ExA's ExQ1, DCO 1.3, DCO 1.6 and DCO 1.8.</li> <li>Insertion of new definition relating to the abbreviation for '<i>unexploded ordnance clearance</i>' in schedules 3 and 4 (paragraph 1).</li> <li>Amendment to schedules 3 and 4 (condition 20(1)(a)(ii)) to reduce the micro-siting tolerance stated within the condition from 125m to 55m, in response to the ExA's ExQ1, DCO 1.19 and representations by the Maritime and Coastguard Agency.</li> <li>Amendment to schedules 3 and 4 (condition 20(1)(a)(v)) to include micro-siting to avoid Annex I reef habitats, in response to representations by Natural England.</li> <li>Addition of a new sub paragraph (6) in schedules 3 and 4 (condition 23) to specify the maximum number of UXOs that may be cleared under the DMLs, in response to representations by the MMO.</li> </ul> |

| Version/ Deadline                                       | Notable changes made                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>F06 Deadline 4</p> <p><a href="#">[REP4-013]</a></p> | <ul style="list-style-type: none"> <li>▪ Insertion of new definition of '<i>outline environmental management plan</i>' in article 2 and schedules 3 and 4 (paragraph 1), which is similarly reflected in an associated amendment to wording in schedules 3 and 4 (condition 20(1)(e)).</li> <li>▪ Insertion of a new sub paragraph (13) in schedules 3 and 4 (condition 15) to specify notification requirements for cable repair, replacement or protection replenishment activity, in response to representations from the MMO.</li> <li>▪ Further amendment to wording in schedules 3 and 4 (condition 20(1)(a)(v)) relating to micrositing to avoid Annex I reef habitats, to improve clarity of the condition.</li> <li>▪ Amendment to wording in schedules 3 and 4 (condition 20(1)(d)(i)(bb)) relating to cable specification, to improve clarity of the condition.</li> <li>▪ Relocation of schedules 3 and 4 (condition 20 (1)(f)) (written scheme of archaeological investigation) into a new standalone sub paragraph 20(2). Corresponding re-numbering of other sub paragraphs, to improve clarity of the conditions.</li> </ul>                                                                                                                                                                                                                                                                                               |
| <p>F07 Deadline 5</p> <p><a href="#">[REP5-017]</a></p> | <ul style="list-style-type: none"> <li>▪ Amendment to the definition of '<i>commence</i>' in article 2 and in schedules 3 and 4 (paragraph 1) to include the words '<i>low order</i>' clearance of unexploded ordnance, to reflect the removal of high order clearance option from the DMLs.</li> <li>▪ Insertion of new definitions for '<i>deemed marine licences</i>' and '<i>licensed activities</i>' in article 2, in response to the ExA's ExQ2, DCO 2.1.</li> <li>▪ Update to the Design Parameters in schedule 2 (R2) at paragraph (5) to correct a typographical error relating to the maximum hammer energy in respect of pin pile foundations.</li> <li>▪ Insertion of 5 new schedule 2 requirements (R5, R6, R7, R8 and R9) and renumbering of three subsequent requirements. New R5, R6, R7, R8 and R9 relate to mitigation for air traffic services and communications at Warton Aerodrome, Walney Aerodrome, Isle of Man (IoM) (Ronaldsway) Airport and Blackpool Airport in light of IP representations and in response to the ExA's ExQ2, AR 2.2.</li> <li>▪ Insertion of new definitions for '<i>low order unexploded ordnance clearance</i>' and '<i>high order unexploded ordnance clearance</i>' in schedules 3 and 4 (paragraph 1), to reflect the removal of high order clearance option from the DMLs.</li> <li>▪ Revision to wording in schedules 3 and 4 (paragraph 2(f)) (details of licensed marine</li> </ul> |

| Version/ Deadline                                     | Notable changes made                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                       | <p>activities) to replace ‘UXO clearance works’ with ‘low order unexploded ordnance clearance’, to reflect the removal of high order clearance option from the DMLs.</p> <ul style="list-style-type: none"> <li>▪ Insertion of new sub paragraphs in schedules 3 and 4 (condition 13, sub paragraphs (4), (5) and (6)) relating to annual maintenance reporting, in response to representations from the MMO.</li> <li>▪ Further amendment to wording in schedules 3 and 4 (condition 20(1)(a)(v)) relating to micrositings to avoid Annex I reef habitats, to improve clarity of the condition, in response to representations from Natural England and the ExA’s ExQ2, DCO 2.11.</li> <li>▪ Amendment to schedules 3 and 4 (condition 20(1)(d)), to address the ExA’s ExQ2, DCO 2.9.</li> <li>▪ Amendment to schedules 3 and 4 (condition 20(1)(g)), to address the ExA’s ExQ2, DCO 2.10.</li> <li>▪ Amendment to schedules 3 and 4 (condition 22) (underwater sound management strategy) to remove references to detonation of unexploded ordnance, to reflect the removal of high order clearance option from the DMLs.</li> <li>▪ Amendment to schedules 3 and 4 (condition 23) to remove references to detonation of unexploded ordnance and to make reference to ‘low order’ unexploded ordnance clearance throughout, to reflect the removal of high order clearance option from the DMLs.</li> <li>▪ Amendment to schedules 3 and 4 (condition 24) (marine noise registry) to remove references to detonation of unexploded ordnance, to reflect the removal of high order clearance option from the DMLs.</li> <li>▪ Insertion of new sub paragraphs in schedules 3 and 4 (condition 28) relating to construction monitoring for piled foundations, in response to representations from the MMO.</li> <li>▪ Various changes to amend the timeframe for submission of documents to the MMO and Natural England for approval from four months to six months in schedules 3 and 4, in response to representations from the MMO and Natural England.</li> </ul> |
| <p>F08 Deadline 6<br/> <a href="#">[REP6-017]</a></p> | <ul style="list-style-type: none"> <li>▪ Amendments, deletions, insertions and reordering of schedule 2, R5 to R9, relating to mitigation for air traffic services and communications at Warton Aerodrome, Walney Aerodrome, IoM Airport and Blackpool Airport, following further discussions with BAE Systems (Operations) Limited and Blackpool Airport. The two previous requirements that secured mitigation for Blackpool Airport are now combined into a single requirement in</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |



| Version/ Deadline                                     | Notable changes made                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                       | <p>response to representations at D5 and ISH3 by Blackpool Airport.</p> <ul style="list-style-type: none"> <li>▪ Amendment to schedules 3 and 4 (paragraph 2(h)) to include explicit reference to the inert material disposal site, in response to MMO update.</li> <li>▪ Minor amendment to schedules 3 and 4 (condition 13(7)) relating to the timeframe for submission of maintenance reports to the MMO.</li> <li>▪ Further amendment to schedules 3 and 4 (condition 15, sub paragraphs (6) and (7)) to reflect comments from the MMO.</li> <li>▪ Amendment to schedules 3 and 4 (condition 18(5)) to include explicit reference to the inert material disposal site, in response to MMO update.</li> <li>▪ Insertion of new sub paragraph (2) in schedules 3 and 4 (condition 19) (Force Majeure), in response to discussion at ISH3 and hearing action point 21 issued by the ExA.</li> <li>▪ Further amendments to schedules 3 and 4 (condition 22) to reinstate reference to UXO clearance, in response to ISH3 hearing action point 15 issued by the ExA, and to include a new sub paragraph (2) to commit to use of noise mitigation systems and/or noise abatement systems in the underwater sound management strategy to respond to comments from the MMO and Natural England.</li> <li>▪ Minor amendment to schedules 3 and 4 (condition 23(2)) in response to ISH3 hearing action point 16 issued by the ExA.</li> <li>▪ Further amendments to schedules 3 and 4 (condition 24) (marine noise registry) to reflect wording put forward by the MMO.</li> <li>▪ Update to schedule 5 to reflect the documents to be certified, as per article 11 of the draft DCO.</li> </ul> |
| <p>F09 Deadline 7<br/> <a href="#">[REP7-007]</a></p> | <ul style="list-style-type: none"> <li>▪ Minor amendments to schedule 2, R4, R8 and R9 relating to St Anne's and Lowther Hill Primary Surveillance Radar, Air Traffic Services at IoM Airport and Operation of Blackpool Airport to delete the words 'excluding foundations' in the controlling parts of the requirements.</li> <li>▪ Further amendments, deletions and insertions to schedule 2, R5 to R7, relating to mitigation for Air Traffic Services and Communications at Warton Aerodrome and Walney Aerodrome and Primary Surveillance Radar at Warton Aerodrome, in response to concerns of BAE Systems.</li> <li>▪ Insertion of reference to a chemical risk assessment in schedules 3 and 4 (condition 13(3)).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Version/ Deadline | Notable changes made                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <ul style="list-style-type: none"> <li>▪ Deletion of sub-paragraph (1) of condition 18 in schedules 3 and 4 relating to use of chemicals and subsequent renumbering of subsequent sub-paragraphs in response to a request from the MMO.</li> <li>▪ Replacement of sub-paragraph (10) of condition 18 in schedules 3 and 4 relating to dropped objects and replacement with three new sub-paragraphs in response to a request from the MMO. Following removal of condition 18(1) and subsequent renumbering (reported above) condition 18(10) has been replaced by conditions 18(9) to (11).</li> <li>▪ Minor amendment to schedules 3 and 4 (condition 20(1)(a)(v)) to correct a cross reference to another condition. This reflects a change made to the draft DCO at D4 which comprised the relocation of schedules 3 and 4 (paragraph 20(1)(f)) (written scheme of archaeological investigation) into a new standalone sub paragraph 20(2).</li> </ul> |

## 6.4. MAIN ISSUES ARISING AND EXAMINING AUTHORITY'S CONSIDERATION

6.4.1. This section of the Report addresses important matters which have not been agreed between any IP and the Applicant by the end of the Examination that are not covered in detail in the Planning Issues chapter (Chapter 3) of this Report. This section also includes certain matters which have been the subject of the ExA's written questions and/ or discussion at hearings about potential changes to the Applicant's final draft DCO, which again have not been covered in Chapter 3.

6.4.2. As evidenced in version F09 of the draft DCO [\[REP7-007\]](#) and Table 10 above, many of the matters raised by the ExA and IPs in relation to the provisions of the draft DCO were addressed through drafting amendments during the Examination. In general, the Applicant was responsive to the matters raised in submissions and questions and sought to revise provisions accordingly. Where changes were not made to the provisions of the draft DCO, the Applicant explained the reasons for that and in some cases added wording to the EM or relevant management plans secured by the draft DCO to achieve the desired outcome.

6.4.3. However, the following matters remain worthy of further discussion:

- Commencement period for the Proposed Development (R1)
- The transfer of the benefit of the Order (article 7)
- The inclusion of force majeure provisions (schedules 3 and 4, condition 19)
- Determination dates for discharging conditions (schedules 3 and 4, conditions 20, 21 and 22)
- Documents to be certified

### **Commencement period for the Proposed Development (R1)**

6.4.4. Schedule 2, R1(1) (Time Limits) of the draft DCO allows 7 years as opposed to the more standard 5 year timeframe to commence development following the grant of

the DCO. The Applicant's EM [\[REP7-008\]](#) stated that the authorised development is of a significant scale and complexity, there are no guarantees of the timing for securing a Contract for Difference for the authorised development, and there can be long lead in times for equipment and services. The Applicant also stated that as the transmission assets are being sought under a separate DCO there is further complexity around the timing and coordination of both consents to justify a seven year period for commencement.

- 6.4.5. The matter was briefly discussed at ISH1 and an action was issued for the Applicant to explain how a seven year commencement period aligns with the national policy position that offshore wind is critical national priority infrastructure, and how it aligns with the timeframes cited within the Environmental Statement for commencement of construction (2026) and operation (2030) [\[EV2-005\]](#). IPs were also asked to submit comments on the appropriateness of a longer commencement period.
- 6.4.6. The Applicant updated its EM [\[REP1-024\]](#), tracked version] but did not specifically address the action. It did, however, reiterate other made Orders which had included a seven-year commencement period as evidence of precedent.
- 6.4.7. The MMO in its response [\[REP1-048\]](#) noted its concerns with R1(1) expressing that the accuracy of the data in the environmental statement may be out of date after five years due to the nature in some environments changing over this period. The Applicant subsequently refuted that suggestion [\[REP2-005\]](#) and asserted that the potential for changes in the environmental baseline over time is one of the reasons that pre-commencement surveys are a standard requirement, secured in this case through condition 27 of the DMLs.
- 6.4.8. BAE on the other hand in its post ISH1 submission [\[REP1-042\]](#) advised the ExA that because of the complexity of the project and the inter-relationship with other projects in the Irish sea combined with the other regulatory procedures to be adhered to, a longer period in which development can be started (seven years) was appropriate.
- 6.4.9. The ExA pursued the matter further with the Applicant in ExQ1 DCO 1.4 [\[PD-004\]](#), to which it simply restated its arguments already presented. The ExA also sought clarification from the Applicant of precedent for R1(2) which would extend the seven-year commencement period by an additional year if legal proceedings are begun to challenge the validity of the made Order.
- 6.4.10. The Applicant advised that as per information in the EM, the drafting for R1(2) was based on the drafting in the National Grid (Yorkshire Green Energy Enablement Project) DCO 2024 (hereafter referred to as the Yorkshire Green Order). It added that a reasonable developer would not be expected to undertake activities authorised by the DCO, or progress the discharge of requirements and conditions, until such proceedings were determined, and it noted that the judicial review of the East Anglia One North and East Anglia Two offshore windfarm (OWF) Orders took approximately 22 months until the final decision was issued by the Court of Appeal. For that reason, the Applicant stated that a one year period in R1(2) was reasonable. When asked in ExQ2 DCO 2.5 [\[PD-009\]](#) for clarity on what was meant by the words in the requirement that say '*if proceedings are begun*', the Applicant advised that the wording in R1(2) replicates the provisions of s91(3A) and (3B) of the Town and Country Planning Act 1990 as they apply to grants of planning permission [\[REP5-015\]](#).

### ***ExA considerations on the commencement period***

- 6.4.11. Taking the above into consideration, the ExA does not consider that the Applicant has provided sufficient justification for increasing the standard five year period in which to commence a DCO to seven years. The ExA notes the Applicant's concerns regarding supply chains but there is no evidence before the ExA that this has caused significant delays on other developments of a similar nature. The ExA is cognisant of the fact that the Applicant's Transmissions Assets application (which is a joint application with Morecambe OWF Generation Assets) was submitted after the Morgan Generation Assets application and at the time of close of the Examination was still in pre-examination and as such is currently undetermined. Nonetheless, Table 1.2 of the Applicant's Report on Interrelationships with Other Infrastructure Projects, which was updated at D6 [\[REP6-016\]](#) provides the anticipated timeframes for construction, grid connection and expected start of operation by 2030. If the Applicant had any concerns that the grid connection would not be deliverable by that date such that it would affect deliverability of the generation assets then it should have raised it during Examination, but it did not.
- 6.4.12. The ExA acknowledges the Applicant's statements that it is their intention to commence construction as soon as it can and that seven years is a backstop position. However, the ExA considers that the urgent need for renewable energy (see [Chapter 3](#) of this Report for detailed discussion) outweighs the Applicant's justification for seeking seven years in which to commence and agrees with the SoS position on previous decisions (such as Drax Bioenergy with Carbon Capture), that the Applicant could apply for an extension to increase the time period if it was needed.
- 6.4.13. With regard to R1(2) and the additional one-year period for commencement if legal proceedings are begun, the ExA is also not convinced that this has been suitably justified. Whilst the Yorkshire Green Order has been cited as precedent for the provision, the ExA notes that neither the ExA nor the SoS in that case provided any commentary on the merit and justification of such a provision. The ExA is therefore not convinced that there was any meaningful engagement on the effects of its inclusion in that case, and that being so, its inclusion in the Yorkshire Green Order is not a compelling reason for its inclusion in the Morgan DCO.
- 6.4.14. Whilst the ExA is alive to the possibility of a legal challenge to the grant of the Morgan DCO, it is also alive to the discussions of the government and its publicity on possible reform of the judicial review process to seek to limit the number of legal challenge opportunities for NSIPs. Such reform is anticipated to come forward in the Planning and Infrastructure Bill for deliberation by Parliament. It is not for the ExA to speculate on the outcome of that process, but it is reasonable for the ExA to acknowledge the government's desire to try to prevent lengthy challenge periods such as those for East Anglia One North and East Anglia Two. In that regard, the ExA is not convinced that a reasonable argument has been put forward for an additional year for commencement of the development. While it is recognised that a similar provision is included in the Town and Country Planning Act, it remains that a provision to extend the life of a permission if subject to legal challenge has not been included in the PA2008, which governs the determination of NSIP applications. It remains open to Parliament to amend legislation to include such a provision for NSIPs if it feels it is necessary but to date it has not done so.
- 6.4.15. In the meantime and in order to provide as much certainty to statutory consultees, other IPs, the public, and to Parliament about when this Proposed Development would commence after the grant of an Order and in order to give the appropriate

weight to the national policy ambition of delivering up to 50 GW of offshore wind by 2030, the ExA recommends deletion of R1(2) and the amendment of R1(1) so that the time limit is reduced from seven years to the standard five years only and this is reflected in the ExA's recommended DCO (see Table 11 below and [Appendix D](#)).

#### **The transfer of the benefit of the Order (article 7)**

- 6.4.16. The MMO initially raised an objection to the wording of article 7 concerning the transfer of the benefit of the Order in its RR [\[RR-020\]](#). It was made clear by both the Applicant and the MMO that despite on-going discussions it was unlikely that the issue would be resolved and that it would fall to the SoS to make a final determination on the wording to be included in the DCO, should it be made. That was the final position in the SoCG between the parties [\[REP6-081\]](#). In a nutshell, article 7 of the draft DCO would allow the undertaker to transfer both the benefit of the Order and the DMLs to another entity following notification to and approval by the SoS.
- 6.4.17. Written exchanges occurred from commencement of the Examination through to closing statements:
- MMO [\[RR-020\]](#), [\[REP2-029\]](#), [\[REP4-041\]](#), [\[REP5-056a\]](#), [\[REP6-094\]](#)
  - Applicant [\[PD1-017\]](#), [\[REP3-004\]](#), [\[REP3-006\]](#), [\[REP4-004\]](#), [\[REP5-009\]](#), [\[REP5-015\]](#), [\[REP6-014\]](#)
- 6.4.18. The ExA also raised the matter in ExQs [\[PD-004\]](#), [\[PD-009\]](#) and it was discussed in ISHs [\[EV2-001\]](#), [\[EV5-012\]](#), [\[EV6-009\]](#), however the MMO was not in attendance, therefore the ExA only sought updates from the Applicant and requested written updates from the parties.
- 6.4.19. The MMO identified that s72(7)(a) of the MCAA 2009 already permits a licence holder to make an application for the transfer of a marine licence. The purpose of the application is to ensure that the MMO has a record of the person who has the benefit of the licence.
- 6.4.20. The MMO confirmed that it is the regulatory authority who would be responsible for the enforcement of the provisions of the DML. As a result, it has to retain a record of the DML and who holds the benefit of that licence in order to be able to fulfil its statutory responsibilities, including enforcement, as it does in respect of any other marine licence. The key concern held by the MMO was that article 7 would operate to override and/ or unsatisfactorily duplicate provision that already exists within the 2009 Act for dealing with variations to marine licences and would give rise to significant enforcement difficulties for the MMO. The MMO also stated that such provisions are also inconsistent with the Planning Inspectorate Guidance<sup>52</sup> on how DMLs should operate within a DCO, which provides that where the undertaker chooses 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.*”
- 6.4.21. The MMO identified the s72 application process to be relatively quick and that, whilst the MMO can officially take up to 13 weeks, given it is an administrative task and requires no consultation, in practice it is often much quicker, with the MMO quoting around 6 weeks [\[REP2-029\]](#). It explained that the statutory system for

---

<sup>52</sup> Planning Inspectorate Guidance: [Advice on working with public bodies in the infrastructure planning process, Annex B: - Marine Management Organisation](#), updated 10 October 2024



transfer requires an application to the MMO, there is no further consultation, and the transfer is given effect by amendment to the licence holder section of the Marine Licence. The MMO was not aware of having refused an application to transfer a marine licence.

6.4.22. In contrast, the MMO considered the procedure established in the draft DCO would be decidedly more complex, would be a greater administrative burden for all parties and would take longer to give effect to the transfer. It noted that in contrast with the s72 process, the draft DCO article 7 process would require:

- a. An application to the SoS
- b. Consultation with the MMO
- c. A decision by the SoS
- d. Notification of the decision

6.4.23. The MMO therefore stated that article 7 had no material procedural or administrative advantages over the existing statutory process, therefore, the existing s72 process should be used.

6.4.24. The MMO also noted that the Applicant relied on precedent to justify the inclusion of article 7 in the draft DCO, but it considered that the Applicant had not identified any reasoned justification in any of the precedent decisions cited for the inclusion of transfer of the benefit provisions in those made DCOs. The MMO continued to raise objection to article 7 throughout the entire Examination.

6.4.25. The Applicant's position was, as noted above, that the drafting in the draft DCO reflects a long-established precedent regarding the transfer of DCO powers and DMLs that has been endorsed by the SoS many times, including most recently in the Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024 (the Sheringham DCO) [PD1-017]. In its EM the Applicant also cited Norfolk Boreas, Norfolk Vanguard, East Anglia One North, East Anglia Two and Hornsea Four OWFs [REP6-019] as additional precedents. It stated that it is important that the DCO and any DML can be transferred together using the process set out in article 7, as there is considerable overlap between the authorisations and the requirements/ conditions. This, the Applicant argued, was justification for a departure from the procedure under the MCAA 2009 and was a sensible and expedient part of the wider power to transfer the benefit of the Order.

6.4.26. The Applicant added that the reason that precedent is a useful reference in the determination of planning applications is that it removes a need to focus time and effort re-considering matters that have been previously settled, unless there is a specific reason in any one case to do so. The Applicant therefore suggested that there was no exceptional reason to depart from well-established precedent in respect of this matter [REP4-004].

6.4.27. Notwithstanding, when the Applicant was asked in ExQ1 DCO 1.2 if it had omitted some text used in some of those previous precedents which required the undertaker to consult with the SoS before making an application for consent to transfer the benefit [PD-004], it stated it did not include that wording in the Morgan draft DCO as it was not considered to be strictly necessary [REP3-006]. The Applicant also added

that the undertaker must in any event give prior notice in writing of a proposed transfer under articles 7(10) and 7(11).<sup>53</sup>

6.4.28. In addition, the Applicant was also asked in ExQ1 DCO 1.2 about consistency of the drafting of article 7 with the corresponding provision in the Sheringham DCO. The Applicant stated it considered there to be no substantial differences, although it did identify that the SoS in the Sheringham DCO made an amendment to drafting in article 5(7)(b) of that Order to ensure that the undertaker would remain liable for any breach of an obligation which occurs prior to the transfer of the DML or as a result of any activity carried out by the undertaker on behalf of the transferee [REP3-006]. The Applicant noted that the rationale for the SoS's addition was not included in the Sheringham DCO decision letter and explained that inclusion of a similar provision in article 7 of the Morgan DCO would not be necessary because in practice, the transferor and transferee would decide how to deal with breaches between them as part of the commercial terms for the transfer agreement or lease.

6.4.29. The Applicant did nonetheless make some other minor changes to article 7 during the Examination to reflect some additional drafting concerns raised by the ExA in ExQ1 DCO 1.2, notably:

- an amendment to article 7(4) to state that the SoS 'must' consult the MMO before giving consent to the transfer or grant, instead of 'shall' consult; and
- an amendment to article 7(11) to include a tailpiece provision to provide the MMO with powers to amend the name of the undertaker on the relevant marine licence(s) following a transfer consented by the SoS.

6.4.30. The ExA at ISH3 issued an action [EV6-011] for the MMO to advise without prejudice whether article 7(9) could be improved by the inclusion of a 28 day notice period to the SoS and the MMO before any transfer of the benefit would take effect. The Applicant was also invited to comment on this.

6.4.31. In its closing statement [REP6-094] the MMO advised that while its position remained that the DML should not form part of article 7 provisions, it had no concerns with specifying a notice period in article 7(9). The Applicant advised that while it had not included the suggested notice period in the final version of article 7(9) in the final draft DCO, it would not have any concerns if the ExA or SoS considered this to be a beneficial addition [REP6-010].

#### ***ExA considerations on the transfer of the benefit of the Order***

6.4.32. On the basis that the PA2008 provides that a DCO may apply, modify or exclude statutory provision, the ExA considers that there is no legal reason why the Morgan DCO should not include transfer of the benefit provisions that override s72 provisions within the MCAA 2009. This of course does not mean that such action should or must be taken and there may be operational difficulties with such an approach for monitoring compliance and taking enforcement action for example, but the practice of doing so seems to be well established.

6.4.33. The ExA appreciates the MMO's concerns that there has never been rationale for the inclusion of transfer of benefit provisions in any of the ExA reports and SoS decision letters which have included the provision and which the Applicant cites as

---

<sup>53</sup> In the Applicant's response to ExQ1 DCO 1.2 in [REP3-006] it erroneously stated the undertaker must give prior notice in writing of a proposed transfer under articles 5(10) and 5(11). The correct references are articles 7(10) and 7(11).

precedent for the provision in the Morgan draft DCO. Indeed, the MMO's line of argument has struck a chord with the ExA, as it is partially because of the absence of rationale in the Yorkshire Green Order decision letter for the inclusion of an additional year to commence development if legal proceedings are begun that the ExA is recommending that that an identical 'additional year to commence' provision in R1(2) be removed from the Morgan DCO (as reported in paragraphs 6.4.11 to 6.4.15 above).

- 6.4.34. However, the ExA needs to draw a distinction between its position on R1(2) and article 7 of the Morgan draft DCO. The ExA has not scrutinised all those previous made Order decisions that have included a transfer of benefit provision to determine if the provision was discussed, reasoned or amended by an ExA or a SoS, but on the basis that it has been included in multiple made orders and largely in the same form it is reasonable to conclude that those earlier examining authorities and secretaries of state considered the position to be sound and settled. Certainly, and unlike R1(2), the inclusion of the transfer of benefit provision is not novel. For that reason, and it is not the only reason, the ExA considers the Applicant's case for inclusion of article 7 is more compelling.
- 6.4.35. The ExA agrees with the Applicant that there is an obvious benefit to having a single approach for the transfer of benefits as opposed to the dual system that would result from the use of s72. The ExA is not persuaded by the submissions of the MMO that such a route would be any better than the one laid out in the draft DCO and even if the s72 route is less administrative, that benefit is outweighed by the advantage of having matters of transfer in the hands of a single body.
- 6.4.36. The ExA also does not see any reason as to why the SoS is not sufficiently competent to make a decision on the transfer, especially if this decision is undertaken in consultation with the MMO. Whilst this consultation may be an additional step in the process, given the administrative nature of the transfer as explained by the MMO, the ExA do not consider this would materially affect the process. In the ExA's view such consultation would allow the MMO additional time in advance of any transfer to ensure that it is in a position to amend its records once any transfer is confirmed, addressing the MMO's concerns in relation to enforcement. The inclusion also of an amendment to article 7(9) to include a 28 day notice period, which is recommended by the ExA, would further aid the MMO's case management.
- 6.4.37. For these reasons, the ExA is content with the approach proposed by the Applicant. Notwithstanding, the ExA considers that there is room for further improvement to the drafting by adding to article 7(5)(b) a tailpiece akin to that drafted into the Sheringham DCO about undertaker liabilities for breaches that occur pre-transfer. While the ExA appreciates that commercial terms may set responsibilities and liabilities out for both transferor and transferee, for the purpose of enforcement the MMO should not be impeded by arrangements in private commercial agreements/ contracts. This amendment, along with several other minor revisions to address text omissions, is reflected in the ExA's recommended DCO (see Table 11 below and [Appendix D](#) of this Report).

**The inclusion of force majeure provisions (schedules 3 and 4, condition 19)**

- 6.4.38. Condition 19 of DML schedules 3 and 4 provide the undertaker with force majeure protections for actions taken by the master of a vessel in an emergency which results in deposit of authorised deposits anywhere within or outside the Order limits. The condition also includes a duty on the undertaker to notify the MMO within 48

hours of the circumstances of the deposit. Authorised deposits are defined in paragraph 4 of the DMLs and include:

- a. iron, steel, copper and aluminium;*
- b. stone and rock;*
- c. concrete and grout;*
- d. sand and gravel;*
- e. plastic and synthetic;*
- f. material extracted from within the Order limits during construction drilling or seabed preparation for foundation works and cable sandwave preparation works; and*
- g. marine coatings, other chemicals and timber.*

- 6.4.39. The MMO in its RR [\[RR-020\]](#) stated that it did not consider the condition was necessary as s86 of the MCAA 2009 already provides a defence for action taken in an emergency in breach of any licence conditions.
- 6.4.40. The Applicant noted [\[PD1-017\]](#) that s86 of the MCAA 2009 simply acts as a defence in the event a person is charged with an offence, whereas condition 19 imposes a notification duty on the undertaker and as such does not duplicate s86 of the MCAA 2009.
- 6.4.41. The matter remained in dispute at the end of the Examination with the MMO stating in the final SoCG [\[REP6-081\]](#) that the matter was not agreed and would have a material impact. This was despite the Applicant advising at ISH3 [\[REP6-012\]](#) and in its closing statement [\[REP6-014\]](#) that whilst it considers the condition serves a useful purpose, it does not consider it essential for inclusion in the DMLs and would have no objection to its removal if the ExA and SoS agreed with the MMO's position.
- 6.4.42. The crux of the issue for the MMO was set out in its D5 submission [\[REP5-056a\]](#). It stated that the terms of condition 19 would not be included in standalone marine licences and as per planning inspectorate advice<sup>52</sup>, DMLs should be broadly consistent with standalone marine licences. The MMO also stated that the condition is drafted to apply for stress of weather or any other cause which is very broad and could include causes which are entirely within the master's control such as negligence matters.
- 6.4.43. According to the MMO, the condition as it stands is too subjective and therefore unenforceable and is due to the fact that it would be down to the master to determine whether it is necessary to make the deposit and there are no defined criteria. Overall, the MMO argued that condition 19 does not meet the tests for imposing conditions<sup>54</sup>, which are that they should be precise, enforceable, necessary, relevant to the development, relevant to planning and reasonable in all other respects. It also queried whether the condition (if it were to remain in the DMLs) should include a further requirement on the undertaker to remove the items deposited.
- 6.4.44. As noted above, the matter was briefly discussed at ISH3 and the ExA issued an action for the MMO (action 21 [\[EV6-011\]](#)) to subsequently advise the ExA without

---

<sup>54</sup> Planning Inspectorate Guidance: [Nationally Significant Infrastructure Projects - Advice Note Fifteen: drafting Development Consent Orders](#), updated 24 March 2025

prejudice to its stated position on condition 19, whether the condition could be improved by the inclusion of a sub paragraph (2) as follows:

*(2) The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.*

- 6.4.45. The MMO advised [\[REP6-094\]](#) that should the SoS decide that the condition remains then sub paragraph (2) should be included. The Applicant included sub paragraph (2) in its final draft DCO [\[REP7-007\]](#).

***ExA considerations on the inclusion of force majeure provisions***

- 6.4.46. The ExA is content with the inclusion of force majeure provisions within the draft DMLs on the basis that the provisions have been included in a large number of OWF made Orders (for example the Triton Knoll OWF Order 2013, the Rampion OWF Order 2014, Hornsea Three OWF Order 2020, East Anglia ONE North OWF 2022 and Hornsea Four OWF Order 2023) to the extent that precedent seems to be well-established.
- 6.4.47. The ExA also notes that s86 of the MCAA 2009 requires a person who is seeking to avail themselves of the defence for breaching a requirement or condition by taking action in an emergency, to inform the MMO within a “*reasonable time*” of the activity carried out, the locality and circumstances in which it was carried out and any substances or objects concerned. However, condition 19 of the DMLs imposes a more prompt duty on the undertaker to notify the MMO in an explicit timeframe of 48 hours. To that extent, the ExA considers that condition 19 is not inferior to s86 of the MCAA 2009 and does not necessarily duplicate it. For that reason, there is merit in retaining condition 19 in the DMLs.
- 6.4.48. Notwithstanding, the ExA is persuaded by the MMO’s concerns that the drafting of condition 19, particularly the words “*or any other cause*”, is fairly broad and may present enforcement difficulties for the MMO. The ExA acknowledges that the wording employed by the Applicant is identical to the wording used in other OWF Orders and it could therefore be reasonably argued that the wording is unproblematic. Nevertheless, the ExA considers that there is merit in seeking to improve and tighten the wording to address the MMO’s concerns around negligence. The ExA therefore suggests that the condition should be amended by adding in the words in italicised bold text as follows:

19(1) If due to stress of weather or any other cause ***beyond the reasonable control of the master of a vessel, and which the master of a vessel by the exercise of reasonable diligence is unable to prevent, avoid or remove,*** the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life or of the vessel is threatened, within 48 hours the undertaker must notify full details of the circumstances of the deposit to the MMO.

- 6.4.49. This amendment is reflected in the ExA’s recommended DCO (Table 11 below and [Appendix D](#) of this Report). The amended condition (along with the Applicant’s inclusion of sub paragraph (2), to require the unauthorised deposits to be removed at the undertaker’s expense), is considered to be sufficiently clear and adequately justified for inclusion in the DMLs.



**Determination dates for discharging conditions (schedules 3 and 4, conditions 20, 21 and 22)**

- 6.4.50. Condition 20 of the draft DMLs relates to the submission of pre-construction plans and documents (including but not limited to a design plan, monitoring plans, construction method statement, marine mammal mitigation protocol and so on) for approval by the MMO prior to the commencement of any licensed activities. Condition 21(2) of the draft DMLs requires the MMO to determine those applications for approval within six months of receipt. Condition 22(4) of the draft DMLs similarly requires the MMO to determine within six months an application for approval of an underwater sound management strategy, which would be required for pile driving activities and low order UXO clearance.
- 6.4.51. The MMO stated in its RR [\[RR-020\]](#) that it would be inappropriate to apply a strict timeframe to the decisions it is required to make on conditions of the DMLs 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 are not subject to set determination periods. The MMO also stated that while the Applicant may wish to create some certainty about when it can expect discharge of conditions to be approved, it is for the developer to ensure that it applies for any such approval in sufficient time to allow the MMO sufficient time to consider the information before it.
- 6.4.52. During the course of the Examination (at D5) the Applicant made changes to DML conditions 13(3), 20(1)(c), 21(1), 22(2) and 23(2), to replace the timeframe for submission of certain documents to the MMO for approval from four months to six months in response to representations from the MMO and Natural England [\[REP5-018, tracked version\]](#). Nonetheless, the Applicant also retained conditions 21(2) and 22(4) to require MMO determination in six months (increased from four), stating that timely discharge of conditions is important to ensure that the Applicant could meet its construction programme and that such conditions were well preceded [\[PD1-017\]](#).
- 6.4.53. The MMO's final statement of common ground with the Applicant maintained this issue as not agreed and material [\[REP6-081\]](#). The MMO noted that it generally works towards a 13-week turn around and would never unduly delay its approvals, but it could not be bound by arbitrary deadlines. The MMO also identified that it was unclear what would happen if the six month approval deadline was not met, and how that would impact on the MMO's regulatory function [\[REP6-094\]](#).
- 6.4.54. In its final submission [\[REP7-004\]](#) the Applicant maintained that due to the provision of the detailed outline management plans that have been submitted through the application and due to the fact that these are plans that are quite standard for a mature industry in offshore wind, the discharge of conditions within six months is justified.

***ExA considerations on determination dates for discharging conditions***

- 6.4.55. The ExA recognises that there is a clear policy imperative to expedite and streamline the consenting and licensing regimes for major renewables projects and that timely decision-making in respect of DML conditions is very important in avoiding unnecessary delays to the delivery programme, particularly in the pre-construction phase. Nonetheless, DML conditions must be necessary and enforceable and the ExA is cognisant that there are no legislative provisions which govern the discharge of conditions on a marine licence (in the way that there are provisions in The Town and Country Planning (Development Management

Procedure) (England) Order 2015 for example for regulating the time provided to local authorities to discharge conditions in planning permissions).

- 6.4.56. Furthermore, the ExA considers that it is unclear what course of action could be taken in the event that the MMO failed to comply with the six month decision timeframe. Consequently, it is not clear or certain how the timescales imposed upon the MMO under Conditions 21(2) and 22(4) of the Applicant's final draft DCO would be enforced, and by whom. The Applicant's final Explanatory Memorandum does not provide any assistance on this point [\[REP7-008\]](#).
- 6.4.57. Whilst noting the Applicant's reasoning that the provisions would have value in setting an expectation that decisions should be made within six months of applications being made, the ExA considers that this expectation is already set by the requirement for the relevant plans and programmes to be submitted at least six months prior to the intended commencement of licensable activities. The ExA also acknowledges that while there is some precedent for including a timescale for determination of pre-construction applications by the MMO within the DMLs of some made Orders, it notes there is inconsistency between previous made Orders with some including specified time periods (for example the Hornsea Three OWF Order 2020 and the Sheringham DCO) and others not including any specification at all (for example the Dogger Bank Creyke Beck OWF Order 2015 and the East Anglia ONE North OWF 2022). As such, it cannot be said with confidence that conditions 21(2) and 22(4) are unassailable.
- 6.4.58. On the basis of the evidence before it, the ExA therefore considers that the enforceability of the provisions is uncertain and their necessity in this case has not been adequately justified. For these reasons, the ExA recommends the deletion of conditions 21(2) and 22(4) from the Applicant's final DML. This amendment is reflected in the ExA's recommended DCO in Table 11 below and [Appendix D](#) of this Report.

#### **Documents to be Certified**

- 6.4.59. Schedule 5 of the Applicant's draft DCO includes a table of documents to be certified (Table 4 [\[REP7-007\]](#)). The Applicant has updated this table in each version of its draft DCO throughout the Examination, replacing superseded document references with the most up to date versions and/ or adding new documents to the table that were submitted during the Examination. Some of those new documents for example included responses to representations made by the MMO, Natural England and Natural Resources Wales. The Applicant's associated document entitled Schedule of Changes to the draft Development Consent Order, which was also submitted at each deadline in the Examination did not provide any information on the Applicant's rationale for including some new documents in Table 4 of schedule 5 and not others.
- 6.4.60. In its Rule 17 letter [\[PD-012\]](#) the ExA listed a number of documents which had not been added to Table 4 and asked the Applicant to clarify whether they should be added for certification. Most of the documents listed in the letter related to ornithology. The Applicant's response [\[REP7-004\]](#), DCO 3.2] simply stated that it had reviewed the list provided by the ExA and, where relevant, had updated the list of certified documents within schedule 5 of the draft DCO at D7 [\[REP7-007\]](#). It also added that documents to inform the Habitats Regulations Assessment (HRA) which will be undertaken by the SoS, should not be listed as certified under the draft DCO and therefore the Applicant had not included those in the updated list of certified documents within Schedule 5 of the draft DCO.

### ***ExA considerations on documents to be certified***

- 6.4.61. The ExA accepts the Applicant's position that documents that inform the HRA should not be included in the list of certified documents in Table 4 of schedule 5 of the Order.
- 6.4.62. The ExA notes that at D7 the Applicant deleted from Table 4 of schedule 5 a number of fish and mammal ecology documents submitted at PD1 which provided additional acoustic modelling and mapping information (see draft DCO tracked changes version [REP7-003]). No rationale for those deletions was provided. Nonetheless, the ExA considers that there is no necessity for those documents to be certified because they only provide supporting (but not different) information to the Environmental Statement to address IP representations.
- 6.4.63. The following documents are, however, recommended for inclusion in Table 4 of schedule 5 because the ExA considers that they introduced or changed the assessment, modelling and analysis and findings in the Environmental Statement and therefore should be included for certification:
- [REP4-023] (S D4 14) - Greenhouse Gas (GHG) Reduction Strategy
  - [REP7-005] (S\_D7\_3.1) Annex 3.1 Warton Aerodrome CNS Safeguarding Assessment Report
- 6.4.64. The aforementioned revisions are reflected in the ExA's recommended DCO in [Appendix D](#) of this Report.

## **6.5. ExA's RECOMMENDED CHANGES**

- 6.5.1. The ExA recommends that the changes set out in Table 11 below are made to the Applicant's final draft DCO [REP7-007]. The recommended DCO, which can be found at [Appendix D](#) of this Report, incorporates all the amendments discussed in this Chapter of the Report, along with others that have been discussed in various sections of Chapter 3, concerning:
- Aviation requirements in the draft DCO, specifically Requirements 6, 7 and 9 in schedule 2 (section 3.5, aviation and radar),
  - Chemicals risk assessment specifically conditions 13 and 20(1)(e) in schedules 3 and 4, (section 3.10, physical processes and benthic ecology)
  - Seasonal piling restrictions, specifically condition 22 in schedules 3 and 4 (section 3.7, fish and shellfish ecology)
  - Unexploded ordnance clearance, specifically condition 22 in schedules 3 and 4 (section 3.8, marine mammals)
  - Cable protection deployment, specifically condition 30 in schedules 3 and 4 (section 3.6, commercial fisheries, and section 3.10, physical processes and benthic ecology)
- 6.5.2. Minor typographical errors and minor text omissions in the draft DCO are also identified for rectification in Table 11 but require no expanded explanation in this Chapter. Recommended text insertions are shown in ***italicised bold text*** for ease of identification, whilst text deletions are shown with ~~*italicised strikethrough*~~. Table 11 has employed formatting similar to that used in the draft DCO.

Table 11: DCO Provisions Recommended to be Changed

| Provision                                                        | Wording in final draft DCO [REP7-007]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ExA's Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Articles</b>                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Article 3 - Development consent etc. granted by the Order</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| A3                                                               | 3.—(1) Subject to the provisions of this Order and to the requirements the undertaker is granted—<br>(a) development consent for the authorised development; and<br>(b) consent for the ancillary works; to be carried out within the Order limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3.—(1) Subject to the provisions of this Order and to the requirements <b>in Schedule 2</b> the undertaker is granted -<br>(a) development consent for the authorised development; and<br>(b) consent for the ancillary works; to be carried out within the Order limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | The additional text ensures ease of cross reference to the relevant part of the Order.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Article 7 - Benefit of the Order</b>                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| A7                                                               | 7.—(1) Subject to this article, the provisions of this Order have effect solely for the benefit of the undertaker.<br>(2) Subject to paragraph (5), the undertaker may with the written consent of the Secretary of State—<br>(a) transfer to another person (“the transferee”) any or all of the benefit of the provisions of this Order (excluding licence 1 or licence 2) and such related statutory rights as may be agreed between the undertaker and the transferee; and<br>(b) grant to another person (“the lessee”) for a period agreed between the undertaker and the lessee any or all of the benefit of the provisions of this Order (excluding licence 1 or licence 2) and such related statutory rights as may be so agreed, except where paragraph (6) applies, in which case the consent of the Secretary of State is not required.<br>(3) Subject to paragraph (5), the undertaker may with the written consent of the Secretary of State—<br>(a) where an agreement has been made in accordance with paragraph (2)(a), transfer to the transferee the whole of licence 1 or licence 2 (as appropriate) and such related statutory rights as may be agreed between the undertaker and the transferee; <del>and</del><br>(b) where an agreement has been made in accordance with paragraph (2)(b), grant to the | 7.—(1) Subject to this article, the provisions of this Order have effect solely for the benefit of the undertaker.<br>(2) Subject to <b>sub</b> -paragraph (5), the undertaker may with the written consent of the Secretary of State—<br>(a) transfer to another person (“the transferee”) any or all of the benefit of the provisions of this Order (excluding <b>deemed marine</b> licence 1 or licence 2 <b>referred to in sub-paragraph (3) below</b> ) and such related statutory rights as may be agreed between the undertaker and the transferee; and<br>(b) grant to another person (“the lessee”) for a period agreed between the undertaker and the lessee any or all of the benefit of the provisions of this Order (excluding <b>deemed marine</b> licence 1 or licence 2) and such related statutory rights as may be so agreed, except where <b>sub</b> -paragraph (6) applies, in which case the consent of the Secretary of State is not required.<br>(3) Subject to <b>sub</b> -paragraph (5), the undertaker may with the written consent of the Secretary of State—<br>(a) where an agreement has been made in accordance with <b>sub</b> -paragraph (2)(a), transfer to the transferee the whole of <b>deemed marine</b> licence 1 or licence 2 (as appropriate) <b>granted under Schedules 3 and 4 of this Order</b> and such | The ExA has included some additional words (such as ‘deemed marine’) in various sub-paragraphs to aid interpretation of this article.<br><br>The ExA considers that the inclusion of additional text in article 7(5)(b) is necessary to fill a void in enforcement provisions. It is also preceded in other made Orders, for example The East Anglia Two Offshore Wind Farm Order 2022 and The Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024.<br><br>The inclusion of the additional text in Article 7(5)(c) is to correct an omission and to ensure that any transfer of benefit of a marine licence is transferred with the same restrictions, liabilities and |

| Provision | Wording in final draft DCO [REP7-007]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ExA's Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | <p>lessee for the duration mentioned in paragraph (2)(b), the whole of licence 1 or licence 2 (as appropriate) and such related statutory rights as may be so agreed,</p> <p>except where paragraph (6) applies, in which case the consent of the Secretary of State is not required.</p> <p>(4) The Secretary of State must consult the MMO before giving consent to the transfer or grant to another person of the benefit of the provisions of licence 1 or licence 2.</p> <p>(5) Where the undertaker has transferred any benefit, or for the duration of any period during which the undertaker has granted any benefit, under paragraphs (2) or (3)—</p> <p>(a) the benefit transferred or granted (“the transferred benefit”) shall include any rights that are conferred, and any obligations that are imposed, by virtue of the provisions to which the benefit relates;</p> <p>(b) the transferred benefit shall reside exclusively with the transferee or, as the case may be the lessee, and the transferred benefit shall not be enforceable against the undertaker; and</p> <p>(c) the exercise by a person of any benefits or rights conferred in accordance with any transfer or grant under paragraph (2) is subject to the same restrictions, liabilities and obligations as would apply under this Order if those benefits or rights were exercised by the undertaker.</p> <p>(6) No consent of the Secretary of State is required where the transferee or lessee is the holder of a licence under section 6 (licences authorising supply, etc.) of the 1989 Act(a).</p> <p>(7) Where an agreement has been made in accordance with paragraph (3) references in this Order to the undertaker, will include references to the transferee or lessee.</p> | <p>related statutory rights as may be agreed between the undertaker and the transferee; <b>or</b></p> <p>(b) where an agreement has been made in accordance with <b>sub</b>-paragraph (2)(b), grant to the lessee for the duration mentioned in <b>sub</b>-paragraph (2)(b), the whole of <b>deemed marine</b> licence 1 or licence 2 (as appropriate) <b>granted under Schedules 3 and 4 of this Order</b> and such related statutory rights as may be so agreed,</p> <p>except where <b>sub</b>-paragraph (6) applies, in which case the consent of the Secretary of State is not required.</p> <p>(4) The Secretary of State must consult the MMO before giving consent to the transfer or grant to another person of the benefit of the provisions of <b>deemed marine</b> licence 1 or licence 2.</p> <p>(5) Where the undertaker has transferred any benefit, or for the duration of any period during which the undertaker has granted any benefit, under <b>sub</b>-paragraphs (2) or (3) -</p> <p>(a) the benefit transferred or granted (“the transferred benefit”) shall include any rights that are conferred, and any obligations that are imposed, by virtue of the provisions to which the benefit relates;</p> <p>(b) the transferred benefit shall reside exclusively with the transferee or, as the case may be the lessee, and the transferred benefit shall not be enforceable against the undertaker <b>save in the case of a deemed marine licence transferred or granted in respect of any breach of an obligation by the undertaker which occurs prior to such transfer or grant or which occurs as a result of any activity carried out by the undertaker on behalf of the transferee;</b> and</p> <p>(c) the exercise by a person of any benefits or rights conferred in accordance with any transfer or grant under <b>sub</b>-paragraphs (2) <b>or (3)</b> is subject to the same restrictions, liabilities and obligations as would apply under this Order if those benefits or rights were exercised by the undertaker.</p> | <p>obligations as would apply under this Order if those benefits or rights were exercised by the undertaker.</p> <p>The inclusion of the additional text in Article 7(7) is to correct an omission in the Applicant's final draft DCO.</p> <p>The ExA considers that the words ‘subject to paragraph (9)’ in draft article 7(9)(a)(ii) are superfluous and do not serve any purpose. The recommended inclusion of the bracketed tailpiece to article 7(9)(a)(ii) is to provide time for the MMO to administratively prepare for the transfer taking effect. This tailpiece is preceded in other made Orders, for example, The Associated British Ports (Immingham Green Energy Terminal) Order 2025.</p> <p>See also paragraphs 6.4.32 to 6.4.37 of this Chapter for fuller discussion and reasons on recommended changes to Article 7.</p> |



| Provision | Wording in final draft DCO [REP7-007]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ExA's Comments |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|           | <p>(8) Prior to any transfer or grant under this article taking effect the undertaker must give notice in writing to the Secretary of State and the MMO.</p> <p>(9) A notice required under paragraph (8) must—</p> <p>(a) state—</p> <p>(i) the name and contact details of the person to whom the benefit of the provisions will be transferred or granted;</p> <p>(ii) <del>subject to paragraph (9)</del>, the date on which the transfer will take effect;</p> <p>(iii) the provisions to be transferred or granted; and</p> <p>(iv) the restrictions, liabilities, and obligations that, in accordance with sub-paragraph (5)(c), will apply to the person exercising the powers transferred or granted.</p> <p>(b) be accompanied by—</p> <p>(i) where relevant, a plan showing the works or areas to which the transfer or grant relates; and</p> <p>(ii) a copy of the document effecting the transfer or grant signed by the undertaker and the person to whom the benefit of the powers will be transferred or granted.</p> <p>(10) The notice specified under paragraph (8) must be signed by the undertaker and the person to whom the benefit of the powers will be transferred or granted as specified in that notice.</p> <p>(11) Section 72(7) and (8) of the 2009 Act do not apply to a transfer or grant of the benefit of the provisions of licence 1 or licence 2 to another person by the undertaker pursuant to an agreement under this article save that the MMO may amend any deemed marine licence granted under Schedule 3 or Schedule 4 of the Order to correct the name of the undertaker to the name of a transferee or lessee under this article 7 (benefit of the Order).</p> | <p>(6) No consent of the Secretary of State is required where the transferee or lessee is the holder of a licence under section 6 (licences authorising supply, etc.) of the 1989 Act(a).</p> <p>(7) Where an agreement has been made in accordance with <b>sub-paragraphs (2) or (3)</b> references in this Order to the undertaker, will include references to the transferee or lessee.</p> <p>(8) Prior to any transfer or grant under this article taking effect the undertaker must give notice in writing to the Secretary of State and the MMO.</p> <p>(9) A notice required under <b>sub-paragraph (8)</b> must—</p> <p>(a) state—</p> <p>(i) the name and contact details of the person to whom the benefit of the provisions will be transferred or granted;</p> <p>(ii) the date on which the transfer will take effect <b>(which must be at least 28 days after the date on which the notice is given)</b>;</p> <p>(iii) the provisions to be transferred or granted; and</p> <p>(iv) the restrictions, liabilities, and obligations that, in accordance with sub-paragraph (5)(c), will apply to the person exercising the powers transferred or granted.</p> <p>(b) be accompanied by—</p> <p>(i) where relevant, a plan showing the works or areas to which the transfer or grant relates; and</p> <p>(ii) a copy of the document effecting the transfer or grant signed by the undertaker and the person to whom the benefit of the powers will be transferred or granted.</p> <p>(10) The notice specified under <b>sub-paragraph (8)</b> must be signed by the undertaker and the person to whom the benefit of the powers will be transferred or granted as specified in that notice.</p> <p>(11) Section 72(7) and (8) of the 2009 Act do not apply to a transfer or grant of the benefit of the provisions of <b>deemed marine</b> licence 1 or licence 2 to another person</p> |                |

| Provision                                                          | Wording in final draft DCO [REP7-007]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ExA's Comments                                                                                            |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | by the undertaker pursuant to an agreement under this article save that the MMO may amend any deemed marine licence granted under Schedule 3 or Schedule 4 of the Order to correct the name of the undertaker to the name of a transferee or lessee under this article 7 (benefit of the Order).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                           |
| <b>Schedule 2 – Requirements</b>                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                           |
| <b>Requirement 1 – Time Limits</b>                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                           |
| S2<br>R1                                                           | <p><del>1.—(1) The authorised development must commence no later than the expiration of <b>seven</b> years beginning with the date this Order comes into force.</del></p> <p><del>(2) If proceedings are begun to challenge the validity of this Order before the end of the period referred to in subparagraph (1) the period must be taken to be extended by one year.</del></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p><b>1.</b> The authorised development must commence no later than the expiration of <b>five</b> years beginning with the date this Order comes into force.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | See paragraphs 6.4.11 to 6.4.15 of this Chapter for fuller discussion and reasons on recommended changes. |
| <b>Requirement 6 – Warton Aerodrome Primary Surveillance Radar</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                           |
| S2<br>R6                                                           | <p><b>6.—(1) ...</b></p> <p>(2) ...</p> <p>(3) ...</p> <p>(4) ...</p> <p>(5) The undertaker shall, at its sole cost:</p> <p>(a) ...</p> <p>(b) thereafter maintain, (including without limitation resolving any failure (howsoever caused) of the implemented mitigation solution (or any part thereof)) throughout the lifetime of the authorised development, provided that the PSR remains an operational requirement; and</p> <p>(c) in the event of any amendment being made to the authorised development which gives rise to additional materially new or materially different adverse impacts (over and above the impacts identified by the environmental statement) on the operation of the PSR or the PSR air traffic control operation (or both), work with the MoD and the operator in good faith to implement and to thereafter maintain any additional mitigation</p> | <p><b>6.—(1) ...</b></p> <p>(2) ...</p> <p>(3) ...</p> <p>(4) ...</p> <p>(5) The undertaker shall, at its sole cost:</p> <p>(a) ...</p> <p>(b) thereafter maintain, (including without limitation resolving any failure (howsoever caused) of the implemented mitigation solution (or any part thereof)) throughout the lifetime of the authorised development, provided that the PSR remains an operational requirement <b>of the MoD or the Operator (or both)</b>; and</p> <p>(c) in the event of any amendment being made to the authorised development which gives rise to additional materially new or materially different adverse impacts (over and above the impacts identified by the environmental statement) on the operation of the PSR or the PSR air traffic control operation (or both), work with the MoD and the operator in good faith to implement and to</p> | BAE suggested addition as referred to in Chapter 3 (paragraph 3.5.127) is acceptable, for clarity.        |

| Provision                                                                                        | Wording in final draft DCO [REP7-007]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ExA's Comments                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                  | measures required to prevent or remove such adverse impacts for so long as any of the wind turbine generators forming part of the authorised development are operational and provided that the PSR remains an operational requirement.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | thereafter maintain any additional mitigation measures required to prevent or remove such adverse impacts for so long as any of the wind turbine generators forming part of the authorised development are operational and provided that the PSR remains an operational requirement <b>of the MoD or the Operator (or both)</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                         |
| <b>Requirement 7 – Air Traffic Services at Walney Aerodrome</b>                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| S2<br>R7                                                                                         | 7.—(1) ...<br>(2) ...<br>(3) The Approved <del>Radar</del> Mitigation Scheme must remain in place and be complied with for the lifetime of the authorised development.<br>(4) ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 7.—(1) ...<br>(2) ...<br>(3) The Approved <b>ATS</b> Mitigation Scheme must remain in place and be complied with for the lifetime of the authorised development.<br>(4) ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (3) The reference to 'Radar' appears to be a typographical error as this requirement is in relation to ATS not a Radar mitigation scheme, which is separately covered in requirement 6. |
| <b>Requirement 9 – Operation of Blackpool Airport</b>                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| S2<br>R9                                                                                         | 9.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until the Secretary of State, having consulted with the Operator and the Civil Aviation Authority, confirms in writing that <del>either</del> —<br>(a) appropriate mitigation will be implemented and maintained throughout the lifetime of the authorised development; and<br>(b) appropriate arrangements have been put in place with the operator to ensure that such appropriate mitigation is so implemented and maintained.<br>(2) ...<br>(3) The undertaker shall thereafter comply with all obligations contained within the approved appropriate mitigation for the <del>life</del> of the authorised development. | 9.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until the Secretary of State, having consulted with the Operator and the Civil Aviation Authority, confirms in writing that <b>it is satisfied that</b> —<br>(a) appropriate mitigation will be implemented and maintained throughout the lifetime of the authorised development; and<br>(b) appropriate arrangements have been put in place with the operator to ensure that such appropriate mitigation is so implemented <b>prior to construction of any wind turbine generator and thereafter</b> maintained.<br>(2) ...<br>(3) The undertaker shall thereafter comply with all obligations contained within the approved appropriate mitigation for the <b>lifetime</b> of the authorised development. | Amendments made by the ExA for clarity and consistency, and to ensure the tests are met.                                                                                                |
| <b>Schedule 3 Deemed Marine Licence 1: Wind Turbine Generators and Associated Infrastructure</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |
| <b>Condition 10 – Design parameters</b>                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                         |

| Provision                                                                                          | Wording in final draft DCO [REP7-007]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    | ExA's Comments                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S3<br>C10<br>Table 2                                                                               | <i>Parameter</i><br>...<br>Maximum number of cable crossings (inter-array and inter-connector) <del>(km)</del><br>...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <i>Value</i><br>20 | <i>Parameter</i><br>...<br>Maximum number of cable crossings (inter-array and inter-connector)<br>...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <i>Value</i><br>20 | The deletion of (km) from this part of Condition 10, Table 2 is to correct an error. The value relates to an amount of cable crossings, not a length measurement. Removal of (km) is also consistent with the corresponding entry in Schedule 2, Requirement 2, Table 1 and Schedule 4, Condition 10, Table 3.                                         |
| <b>Condition 31 – Completion of Construction</b>                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                                                                                                                                                                                                                                                                                                                                                        |
| S3<br>C31                                                                                          | 31.—(1) The undertaker must submit a close-out report to the MMO, MCA, Trinity House, the UKHO and the relevant statutory nature conservation body within four months of the date of completion of construction. The close out report must confirm the date of completion of construction and must include the following details—<br>(a) the final number of installed wind turbine generators;<br>(b) the installed wind turbine generator parameters;<br>(c) as built plans;<br>(d) latitude and longitude coordinates of the centre point of the location for each wind turbine generator and offshore substation platform provided as Geographical Information System data referenced to WGS84 datum; and<br>(e) latitude and longitude coordinates of the inter-array and interconnector cables provided as Geographical Information System data referenced to WGS84 datum.<br>(2) ... |                    | 31.—(1) The undertaker must submit a close-out report to the MMO, MCA, Trinity House, the UKHO and the relevant statutory nature conservation body within four months of the date of completion of construction. The close out report must confirm the date of completion of construction and must include the following details—<br>(a) the final number of installed wind turbine generators <b>and offshore substation platforms</b> ;<br>(b) the installed wind turbine generator <b>and offshore substation platform</b> parameters;<br>(c) as built plans;<br>(d) latitude and longitude coordinates of the centre point of the location for each wind turbine generator and offshore substation platform provided as Geographical Information System data referenced to WGS84 datum; and<br>(e) latitude and longitude coordinates of the inter-array and interconnector cables provided as Geographical Information System data referenced to WGS84 datum.<br>(2) ... |                    | Condition 31 of schedule 3 is amended to capture the need to report the final number, size and type of offshore substation platforms that are installed to support the wind turbine generators. This amendment corrects an omission within the Applicant's final DCO. The remaining subparagraphs (1)(c), (d) and (e) and (2) are retained as drafted. |
| <b>Schedule 4 Deemed Marine Licence 2: Offshore Substation Platforms and Interconnector Cables</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                                                                                                                                                                                                                                                                                                                                                        |
| <b>Condition 31 – Completion of construction</b>                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                                                                                                                                                                                                                                                                                                                                                        |
| S4<br>C31                                                                                          | 31.—(1) The undertaker must submit a close-out report to the MMO, MCA, Trinity House, the UKHO and the                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    | 31.—(1) The undertaker must submit a close-out report to the MMO, MCA, Trinity House, the UKHO and the                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    | Condition 31 of schedule 4 is amended to include two new                                                                                                                                                                                                                                                                                               |

| Provision                                               | Wording in final draft DCO [REP7-007]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ExA's Comments                                                                                                                                                                                                                        |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                         | <p>relevant statutory nature conservation body within four months of the date of completion of construction. The close out report must confirm the date of completion of construction and must include the following details—</p> <ul style="list-style-type: none"> <li>(a) as built plans;</li> <li>(b) latitude and longitude coordinates of the centre point of the location for each offshore substation platform provided as Geographical Information System data referenced to WGS84 datum; and</li> <li>(c) latitude and longitude coordinates of the interconnector cables provided as Geographical Information System data referenced to WGS84 datum.</li> </ul> <p>(2) ...</p> | <p>relevant statutory nature conservation body within four months of the date of completion of construction. The close out report must confirm the date of completion of construction and must include the following details—</p> <ul style="list-style-type: none"> <li><b>(a) the final number of installed offshore substation platforms;</b></li> <li><b>(b) the installed offshore substation platform parameters;</b></li> <li>(c) as built plans;</li> <li>(d) latitude and longitude coordinates of the centre point of the location for each offshore substation platform provided as Geographical Information System data referenced to WGS84 datum; and</li> <li>(e) latitude and longitude coordinates of the interconnector cables provided as Geographical Information System data referenced to WGS84 datum.</li> </ul> <p>(2) ...</p> | <p>sub paragraphs to replicate the information contained in condition 31 of schedule 3. Former sub-paragraphs (a), (b) and (c) are subsequently renumbered. This amendment corrects an omission within the Applicant's final DCO.</p> |
| <b>Schedules 3 and 4 Deemed Marine Licences 1 and 2</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                       |
| <b>1. Interpretation</b>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                       |
| S3 and S4 Paragraph 1                                   | <p><b>1.—(1) In this licence—</b><br/> “layout principles” means the layout principles contained within the environmental statement project description referred to as document <del>F4.3</del> in Schedule 5;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p><b>1.—(1) In this licence—</b><br/> “layout principles” means the layout principles contained within <b>Table 3.7</b> of the environmental statement project description referred to as document <b>S_D6_15</b> in Schedule 5;</p> <p><b><u>Include the following additional interpretations:</u></b><br/> <b><i>“pathway to the marine environment” open systems or closed systems that require top up;</i></b></p> <p><b>“chemicals” comprise both substances and preparations;</b></p> <p><b>“preparation” means a mixture or solution composed of two or more substance;</b></p>                                                                                                                                                                                                                                                               | <p>The ES project description was updated at D6 and given a new document reference number. The recommended text changes to the “layout principles” interpretation reflect the D6 update.</p>                                          |



| Provision                                                  | Wording in final draft DCO [REP7-007]                                                                                                                                                                                                                                                                                                                                                                                                                                               | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                                                                                          | ExA's Comments                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <i>"substance" means a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition;</i>                                                         | The inclusion of three additional interpretations were recommended by the MMO <a href="#">[REP6-094]</a> . See the ExA's considerations in paragraphs 3.10.87 to 3.10.91 of Chapter 3 of this Report for a fuller explanation behind these recommended inclusions to the interpretation section of DML1. |
| <b>Condition 13 – Maintenance of the authorised scheme</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                          |
| S3 and S4<br>C13                                           | <b>13.—(1) ...</b><br>(2) ...<br>(3) An operations and maintenance plan in accordance with the outline offshore operations and maintenance plan <del>and including a chemical risk assessment</del> must be submitted to the MMO for approval in writing at least six months prior to commencement of the operation of licensed activities and must provide for review and resubmission every three years during the operational phase.<br>(4) ...<br>(5) ...<br>(6) ...<br>(7) ... | <b>13.—(1) ...</b><br>(2) ...<br>(3) An operations and maintenance plan in accordance with the outline offshore operations and maintenance plan must be submitted to the MMO for approval in writing at least six months prior to commencement of the operation of licensed activities and must provide for review and resubmission every three years during the operational phase.<br>(4) ...<br>(5) ...<br>(6) ...<br>(7) ... | See the ExA's considerations in paragraphs 3.10.87 to 3.10.91 of Chapter 3 of this Report for a fuller explanation behind the recommended deletion of words in sub paragraph (3).                                                                                                                        |
| <b>Condition 18 - Chemicals, drilling and debris</b>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                          |
| S3 and S4<br>C18                                           | <b>18.—(1) ...</b><br>(2) ...<br>(3) ...<br>(4) ...<br>(5) ...<br>(6) ...<br>(7) ...<br>(8) ...<br>(9) ...                                                                                                                                                                                                                                                                                                                                                                          | <b>18.—(1) ...</b><br>(2) ...<br>(3) ...<br>(4) ...<br>(5) ...<br>(6) ...<br>(7) ...<br>(8) ...<br>(9) ...                                                                                                                                                                                                                                                                                                                      | Minor revision to sub paragraph (11) to correct a typographical error in the final draft DCO.                                                                                                                                                                                                            |

| Provision                                                      | Wording in final draft DCO [REP7-007]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ExA's Comments                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                | (10) ...<br>(11) On receipt of notification <del>of</del> the dropped object procedure form the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the marine environment at the undertaker's expense if reasonable to do so.                                                                                                                                                                                                                                                                                   | (10) ...<br>(11) On receipt of notification <b>of</b> the dropped object procedure form the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the marine environment at the undertaker's expense if reasonable to do so.                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Force Majeure</b>                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                         |
| S3 and S4<br>C19                                               | <b>19.</b> —(1) If due to stress of weather or any other cause, the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life or of the vessel is threatened, within 48 hours the undertaker must notify full details of the circumstances of the deposit to the MMO.<br>(2) ...                                                                                                                                                                                                                                                        | <b>19.</b> —(1) If due to stress of weather or any other cause <b><i>beyond the reasonable control of the master of a vessel, and which the master of a vessel by the exercise of reasonable diligence is unable to prevent, avoid or remove,</i></b> the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life or of the vessel is threatened, within 48 hours the undertaker must notify full details of the circumstances of the deposit to the MMO.<br>(2) ...                                                                  | See paragraphs 6.4.46 to 6.4.49 of this Chapter for fuller discussion and reasons on recommended change.                                                                                                                                                                                                                                                                                                |
| <b>Condition 20 – Pre-construction plans and documentation</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                         |
| S3 and S4<br>C20(1)(e)                                         | <b>20.</b> —(1) The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by the MMO, in consultation with Trinity House, the MCA and UKHO as appropriate—<br>(a) ...<br>(b) ...<br>(c) ...<br>(d) ...<br>(e) an offshore environmental management plan (which accords with the outline environment management plan) to include details of—<br>(i) a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents during | <b>20.</b> —(1) The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by the MMO, in consultation with Trinity House, the MCA and UKHO as appropriate—<br>(a) ...<br>(b) ...<br>(c) ...<br>(d) ...<br>(e) an offshore environmental management plan (which accords with the outline environment management plan) to include details of—<br>(i) a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents during | See the ExA's considerations in paragraphs 3.10.87 to 3.10.91 of Chapter 3 of this Report for a fuller explanation behind the recommended inclusion of sub paragraph (e)(iii) and renumbering of subsequent sub paragraphs.<br><br>For the avoidance of doubt, no changes are proposed to Condition 20(1) sub paragraphs (a), (b), (c), (d), (f), (g) or (h) or Condition 20(2) and its sub paragraphs. |

| Provision | Wording in final draft DCO [REP7-007]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ExA's Comments |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|           | <p>construction and operation of the authorised scheme in relation to all activities carried out;</p> <p>(ii) a chemical risk assessment, including information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance and standards;</p> <p>(iii) waste management and disposal arrangements;</p> <p>(iv) the appointment and responsibilities of a fisheries liaison officer;</p> <p>(v) a fisheries liaison and coexistence plan (which accords with the outline fisheries liaison and co-existence plan) to ensure relevant fishing fleets are notified of commencement of licensed activities pursuant to condition 15 and to address the interaction of the licensed activities with fishing activities;</p> <p>(vi) measures to minimise disturbance to marine mammals and rafting birds from transiting vessels; and</p> <p>(vii) measures to minimise the potential spread of invasive non-native species;</p> <p>(f) ...</p> <p>(g) ...</p> <p>(h) ...</p> <p>(2) ...</p> | <p>construction and operation of the authorised scheme in relation to all activities carried out;</p> <p>(ii) a chemical risk assessment, including information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance and standards;</p> <p><b>(iii) a chemical risk assessment for all chemicals that have a pathway to the marine environment used for the marine licensed activities, outside the course of normal navigation, and are not present on the OSPAR List of Substances Used and Discharged Offshore which Are Considered to Pose Little or No Risk to the Environment (PLONOR) to be submitted to the MMO for approval no later than ten weeks prior to use of the chemicals and to include details of —</b></p> <p><b>(aa) the function of the chemical;</b></p> <p><b>(bb) the quantities being used and the frequency of use;</b></p> <p><b>(cc) the physical, chemical, and ecotoxicological properties;</b></p> <p>(iv) waste management and disposal arrangements;</p> <p>(v) the appointment and responsibilities of a fisheries liaison officer;</p> <p>(vi) a fisheries liaison and coexistence plan (which accords with the outline fisheries liaison and co-existence plan) to ensure relevant fishing fleets are notified of commencement of licensed activities pursuant to condition 15 and to address the interaction of the licensed activities with fishing activities;</p> <p>(vii) measures to minimise disturbance to marine mammals and rafting birds from transiting vessels; and</p> |                |

| Provision                                                      | Wording in final draft DCO [REP7-007]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ExA's Comments                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>(viii) measures to minimise the potential spread of invasive non-native species;</p> <p>(f) ...</p> <p>(g) ...</p> <p>(h) ...</p> <p>(2) ...</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                      |
| <b>Condition 21 – Pre-construction plans and documentation</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                      |
| S3 and S4<br>C21                                               | <p><b>21.</b>—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 20 must be submitted for approval at least six months before the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.</p> <p><del>(2) The MMO must determine an application for approval made under condition 20 within a period of six months commencing on the date the application is received by MMO, unless otherwise agreed in writing with the undertaker.</del></p> <p>(3) The licensed activities must be carried out in accordance with the plans, protocols, statements, schemes and details approved under condition 20, unless otherwise agreed in writing by MMO.</p> | <p><b>21.</b>—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 20 must be submitted for approval at least six months before the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.</p> <p>(2) The licensed activities must be carried out in accordance with the plans, protocols, statements, schemes and details approved under condition 20, unless otherwise agreed in writing by MMO.</p>                                                                                                                                                                                                                                       | <p>Condition 21 sub paragraph (2) has been deleted in light of the ExA's position that the condition is not necessary nor enforceable. See the ExA's considerations in paragraphs 6.4.55 to 6.4.58 of this Chapter.</p> <p>Former sub paragraph (3) is therefore subsequently renumbered as sub paragraph (2).</p>                                   |
| <b>Condition 22 – Underwater sound management strategy</b>     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                      |
| S3 and S4<br>C22                                               | <p><b>22.</b>—(1) No driven piling activities or low order UXO clearance can take place until an underwater sound management strategy for those activities, which accords with the outline underwater sound management strategy, has been submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body.</p> <p>(2) <del>Where driven or part-driven pile foundations are proposed to be installed,</del> the underwater sound management strategy submitted under sub-paragraph (1) must include details of the noise mitigation systems and/or noise abatement system that will be utilised to manage sound from <del>those piling activities</del>.</p>                                                          | <p><b>22.</b>—(1) No driven <b>or part-driven</b> piling activities <b>shall commence</b> or low order UXO clearance can take place until an underwater sound management strategy for those activities, which accords with the outline underwater sound management strategy, has been submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body.</p> <p>(2) The underwater sound management strategy submitted under sub-paragraph (1) must include details of the noise mitigation systems and/or noise abatement system that will be utilised to manage sound from <b>driven or part-driven piling activities (or low order UXO clearance unless otherwise agreed in writing by the MMO)</b>.</p> | <p>Amendments to sub-paragraph (1): Piling is a licensed activity controlled by the specific definition of 'commence', hence its recommended inclusion in this sub paragraph. The additional inclusion of the words 'part-driven' is for consistency with other sub-parts of condition 22.</p> <p>Amendments to sub-paragraph (2): See the ExA's</p> |

| Provision                                                     | Wording in final draft DCO [REP7-007]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ExA's Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                               | <p>(3) The underwater sound management strategy must be submitted to the MMO no later than six months prior to the commencement of the relevant activities unless otherwise agreed in writing by the MMO.</p> <p>(4) <del>The MMO must determine an application for approval made under this condition within a period of six months commencing on the date the application is received by MMO, unless otherwise agreed in writing with the undertaker.</del></p> <p>(5) The driven piling activities and low order UXO clearance must be carried out in accordance with the approved underwater sound management strategy, unless otherwise agreed in writing by the MMO.</p> | <p><b><i>(3) No driven or part-driven piling activities or low order UXO clearance may be undertaken between 15 February to 31 March (inclusive) of any year, unless the MMO provides written confirmation to the undertaker beforehand that such works can take place in all or in a specified part of the Order limits during this period or part of this period.</i></b></p> <p><b><i>(4) In considering whether to provide the confirmation referred to in sub-paragraph (3) above, the MMO shall have regard to any report or reports provided to the MMO by or on behalf of the undertaker relating to such matters as additional baseline information, reduced spatial restrictions, piling management measures, installation techniques or noise propagation modelling.</i></b></p> <p>(5) The underwater sound management strategy must be submitted to the MMO no later than six months prior to the commencement of the relevant activities unless otherwise agreed in writing by the MMO.</p> <p>(6) The driven <b>or part-driven</b> piling activities and low order UXO clearance must be carried out in accordance with the approved underwater sound management strategy, unless otherwise agreed in writing by the MMO.</p> | <p>considerations in paragraphs 3.8.68 to 3.8.74 of Chapter 3 of this Report for a fuller explanation behind this amendment.</p> <p>The insertion of new sub-paragraphs (3) and (4): See the ExA's reasoning in paragraphs 3.7.56 to 3.7.58 of Chapter 3 of this Report for a fuller explanation behind this amendment.</p> <p>Deletion of Former sub-paragraph (4): See the ExA's reasoning in paragraphs 6.4.55 to 6.4.58 of this Chapter for a fuller explanation behind this amendment.</p> <p>Retained sub paragraphs (3) and (5) have been renumbered accordingly.</p> |
| <b>Condition 23 – Low order unexploded ordnance clearance</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| S3 and S4<br>C23                                              | <p><b>23.—</b>(1) No low order unexploded ordnance clearance can take place until the following have been submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body and, in respect of the method statement, the MCA—</p> <p>(a) ...</p> <p>(b) a marine mammal mitigation protocol in accordance with the <del>draft</del> marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals, following current best practice as advised by the relevant statutory nature conservation body.</p>                                                                                    | <p><b>23.—</b>(1) No low order unexploded ordnance clearance can take place until the following have been submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body and, in respect of the method statement, the MCA—</p> <p>(a) ...</p> <p>(b) a marine mammal mitigation protocol in accordance with the <b>outline</b> marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals, following current best practice as advised by the relevant statutory nature conservation body.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Replacement of the word 'draft' with '<b>outline</b>' reflects the document's proper title.</p> <p>There are no changes to the other sub paragraphs of condition 23.</p>                                                                                                                                                                                                                                                                                                                                                                                                  |



| Provision                                                     | Wording in final draft DCO [REP7-007]               | ExA Recommended Change                                                                                                                                                                                                                                                                                                                                          | ExA's Comments                                                                                                                                                           |
|---------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                               | (2) ...<br>(3) ...<br>(4) ...<br>(5) ...<br>(6) ... | (2) ...<br>(3) ...<br>(4) ...<br>(5) ...<br>(6) ...                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                          |
| <b>Condition 30 - Reporting of Scour and Cable Protection</b> |                                                     |                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                          |
| S3 and S4<br>C30                                              | <b>30.</b> —(1) ...<br>(2) ...                      | <b>30.</b> —(1) ...<br>(2) ...<br><b>(3) Any cable protection (other than the replenishment or replacement of existing cable protection) authorised under this licence must be deployed within 10 years from the date of completion of construction (as reported in the close-out report under condition 31) unless otherwise agreed by the MMO in writing.</b> | See the ExA's discussion in paragraphs 3.10.61 to 3.10.67 and comments in section 3.6 of Chapter 3 of this Report (in relation to snagging risk for commercial fishing). |

## **6.6. CONCLUSIONS**

- 6.6.1. The ExA has considered all iterations of the draft DCO as set out in Table 9 above and the degree to which the Applicant's final version has addressed matters arising during the Examination. A number of matters are the subject of recommendations in this Chapter and are included in the recommended DCO in [Appendix D](#) of this Report.
- 6.6.2. Taking all matters raised in this Chapter and all matters relevant to the DCO raised in the rest of this Report fully into account, if the SoS is minded to make the DCO, it is recommended to be made in the form set out in [Appendix D](#) of this Report.

## **7. SUMMARY OF FINDINGS AND CONCLUSIONS**

### **7.1. INTRODUCTION**

- 7.1.1. This Chapter sets out the Examining Authority's (ExA) conclusions and recommendation to the Secretary of State for Energy Security and Net Zero (SoS).

### **7.2. CONSIDERATION OF FINDINGS AND CONCLUSIONS**

- 7.2.1. Section (s) 104(2) and s104(3) of the Planning Act 2008 (PA2008) require the SoS to decide the application in accordance with any national policy statement (NPS) and having regard to any local impact report (LIR) and any other matters which the SoS thinks are important and relevant to the decision, except to the extent that one or more of subsections (4) to (8) apply. The ExA is satisfied that no such matters in subsections (4) to (8) apply.
- 7.2.2. In reaching its conclusions, the ExA has had regard to the LIR submitted by the Isle of Man Government Territorial Sea Committee as an important and relevant matter, notwithstanding that the IoM is not a local authority as defined in s56 of the PA2008.
- 7.2.3. The ExA concludes that making the recommended development consent order (DCO) would be in accordance with National Policy Statements (NPS) EN-1 and EN-3, the UK Marine Policy Statement 2011 and the North West Inshore and North West Offshore Marine Plan 2011. With regard to all other matters and representations received in the Examination, there are no important and relevant matters that would individually or collectively lead to a different recommendation to that below.
- 7.2.4. The ExA considers that there is sufficient information before the SoS to undertake an appropriate assessment to fulfil the requirements of the Conservation of Habitats and Species Regulations 2017. Subject to the mitigation measures that would be secured in the recommended DCO, adverse effects on integrity from the Proposed Development alone or in combination with other projects or plans can be excluded.
- 7.2.5. The ExA has also had regard to the provisions of the Human Rights Act 1998 and considers that the Examination has ensured a fair and public hearing. There is no disproportionate or unjustified interference with human rights so as to conflict with the provisions of the Human Rights Act 1998. Throughout the Examination and in producing this Recommendation, the ExA has had due regard to the Public Sector Equality Duty and is satisfied that no breach would arise.
- 7.2.6. The ExA has also had regard to the Natural Environment and Rural Communities Act 2006 (as amended) and the biodiversity duty in its conclusions and in reaching its recommendation. The ExA recommends to the SoS that there is sufficient information to conclude on its duty to Protected Landscapes at s245 of the Levelling up and Regeneration Act 2023.
- 7.2.7. With regard to designated heritage assets and in consideration of Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010, the ExA has found the Proposed Development would not result in harm to designated heritage assets or their setting.
- 7.2.8. The ExA concludes that the very great weight to be attached to the urgent need for the Proposed Development, as set out in NPS EN-1 and EN-3, outweighs the

negative effects as identified in [Chapter 3](#) and summarised in [Chapter 5](#) of this Report.

- 7.2.9. In reaching its conclusions, the ExA has considered the cumulative effects of the Proposed Development with other committed and planned development, including the separate proposals for its transmissions assets and other Irish Sea offshore wind farms which progressed during the Examination.
- 7.2.10. Notwithstanding the identification of offshore wind in NPS EN-1 as critical national priority (CNP) energy development, the ExA would have concluded in favour of the Proposed Development. If the SoS wishes to consider the CNP, the ExA is satisfied that the mitigation hierarchy has been fully explored and the proposed mitigation has been secured by the requirements and other controls included in the recommended DCO.

### **7.3. RECOMMENDATION**

- 7.3.1. For all of the above reasons, and in the light of the ExA's findings and conclusions on important and relevant matters, the ExA recommends that the Secretary of State for Energy Security and Net Zero makes the DCO for Morgan Offshore Wind Project: Generation Assets in the form recommended at [Appendix D](#) of this Report.

## APPENDICES

|                                                                                                                                                   |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| APPENDIX A: REFERENCE TABLES .....                                                                                                                | II    |
| APPENDIX A1: Environmental Statement .....                                                                                                        | II    |
| APPENDIX A2: Statements of Common Ground between the Applicant and Interested Parties at the end of the Examination (in alphabetical order) ..... | V     |
| APPENDIX A3: Summary of Relevant Policy, Guidance and Statements (in alphabetical order) .....                                                    | VI    |
| APPENDIX A4: Summary of Relevant Legislation for the Proposed Development (in alphabetical order).....                                            | VII   |
| APPENDIX A5: Other Made Development Consent Orders referred to by the Applicant and other Interested Parties (in alphabetical order).....         | IX    |
| APPENDIX B: LIST OF ABBREVIATIONS.....                                                                                                            | X     |
| APPENDIX C: HABITATS REGULATIONS ASSESSMENT .....                                                                                                 | XVII  |
| C.1 INTRODUCTION .....                                                                                                                            | XVII  |
| C.2 STAGE 1: FINDINGS IN RELATION TO LIKELY SIGNIFICANT EFFECTS.....                                                                              | XXI   |
| C.3 CONSERVATION OBJECTIVES .....                                                                                                                 | XXVI  |
| C.4 STAGE 2: FINDINGS IN RELATION TO ADVERSE EFFECTS ON INTEGRITY .....                                                                           | XXVII |
| C.5 HRA CONCLUSIONS .....                                                                                                                         | XLIX  |
| C.6 HRA SUB-APPENDIX: OFFSHORE ORNITHOLOGY – CHRONOLOGICAL OVERVIEW OF KEY HRA DOCUMENTS.....                                                     | L     |
| APPENDIX D: THE RECOMMENDED DCO.....                                                                                                              | LIV   |

## APPENDICES



## APPENDIX A: REFERENCE TABLES

### APPENDIX A1: Environmental Statement

| Environmental Statement<br>Volume and Chapter | Title                                            | Examination Library Reference                       |
|-----------------------------------------------|--------------------------------------------------|-----------------------------------------------------|
|                                               | Non-Technical Summary                            | <a href="#">APP-095</a>                             |
| <b>Volume 1</b>                               |                                                  |                                                     |
| Chapter 1                                     | Introduction and Overarching Glossary            | <a href="#">APP-008</a>                             |
| Chapter 2                                     | Policy and Legislative Context                   | <a href="#">APP-009</a>                             |
| Chapter 3                                     | Project Description                              | <a href="#">APP-010</a><br><a href="#">REP6-024</a> |
| Chapter 4                                     | Site Selection and Consideration of Alternatives | <a href="#">APP-011</a>                             |
| Chapter 5                                     | Environmental Impact Assessment Methodology      | <a href="#">APP-012</a>                             |
| <b>Volume 2</b>                               |                                                  |                                                     |
| Chapter 1                                     | Physical Process                                 | <a href="#">APP-013</a><br><a href="#">REP6-026</a> |
| Chapter 2                                     | Benthic Subtidal Ecology                         | <a href="#">APP-020</a><br><a href="#">REP6-028</a> |
| Chapter 3                                     | Fish and Shellfish Ecology                       | <a href="#">APP-021</a><br><a href="#">REP6-030</a> |
| Chapter 4                                     | Marine Mammals                                   | <a href="#">AS-010</a><br><a href="#">REP6-031</a>  |
| Chapter 5                                     | Offshore Ornithology                             | <a href="#">APP-023</a><br><a href="#">REP6-033</a> |
| Chapter 6                                     | Commercial Fisheries                             | <a href="#">APP-024</a>                             |
| Chapter 7                                     | Shipping and Navigation                          | <a href="#">APP-025</a><br><a href="#">REP6-034</a> |
| Chapter 8                                     | Marine Archaeology and Cultural Heritage         | <a href="#">APP-026</a>                             |
| Chapter 9                                     | Other Sea Users                                  | <a href="#">APP-027</a><br><a href="#">REP6-035</a> |
| Chapter 10                                    | Seascape, Landscape and Visual Resources         | <a href="#">APP-014</a><br><a href="#">REP6-036</a> |
| Chapter 11                                    | Aviation and Radar                               | <a href="#">APP-015</a>                             |
| Chapter 12                                    | Climate Change                                   | <a href="#">APP-016</a>                             |

#### APPENDIX A: REFERENCE TABLES

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(A:II)

| Environmental Statement<br>Volume and Chapter | Title                                                                         | Examination Library Reference                       |
|-----------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------|
| Chapter 13                                    | Socio-Economics                                                               | <a href="#">APP-017</a><br><a href="#">REP6-037</a> |
| Chapter 14                                    | Human Health Assessment                                                       | <a href="#">APP-018</a>                             |
| Chapter 15                                    | Inter-Related Effects                                                         | <a href="#">APP-019</a>                             |
| <b>Volume 3</b>                               |                                                                               |                                                     |
| Annex 3.1                                     | Underwater Sound Technical Report                                             | <a href="#">APP-028</a>                             |
| Annex 3.2                                     | Sulphur Hexafluoride Report                                                   | <a href="#">APP-029</a>                             |
| Annex 3.3                                     | Scoping Opinion                                                               | <a href="#">APP-030</a>                             |
| Annex 5.1                                     | Cumulative Effects Screening Matrix                                           | <a href="#">APP-031</a>                             |
| Annex 5.2                                     | Transboundary Impacts Screening                                               | <a href="#">APP-032</a>                             |
| <b>Volume 4</b>                               |                                                                               |                                                     |
| Annex 1.1                                     | Physical Processes Technical Report                                           | <a href="#">APP-033</a>                             |
| Annex 2.1                                     | Benthic Subtidal Ecology Technical Report                                     | <a href="#">APP-050</a>                             |
| Annex 3.1                                     | Fish and Shellfish Ecology Technical Report                                   | <a href="#">APP-051</a>                             |
| Annex 4.1                                     | Marine Mammals Technical Report                                               | <a href="#">APP-052</a>                             |
| Annex 5.1                                     | Offshore Ornithology Baseline Characterisation                                | <a href="#">APP-053</a><br><a href="#">REP1-026</a> |
| Annex 5.2                                     | Offshore Ornithology Displacement Technical Report                            | <a href="#">APP-054</a>                             |
| Annex 5.3                                     | Offshore Ornithology Collision Risk Modelling Technical Report                | <a href="#">APP-055</a><br><a href="#">REP6-038</a> |
| Annex 5.4                                     | Offshore Ornithology Migratory Bird Collision Risk Modelling Technical Report | <a href="#">APP-056</a>                             |
| Annex 5.5                                     | Offshore Ornithology Apportioning Technical Report                            | <a href="#">APP-057</a><br><a href="#">REP6-039</a> |
| Annex 5.6                                     | Offshore Ornithology Population Viability Analysis Technical Report           | <a href="#">APP-058</a>                             |
| Annex 6.1                                     | Commercial Fisheries Technical Report                                         | <a href="#">APP-059</a><br><a href="#">REP6-040</a> |
| Annex 7.1                                     | Navigational Risk Assessment                                                  | <a href="#">APP-060</a><br><a href="#">REP6-041</a> |
| Annex 8.1                                     | Marine Archaeology Technical Report                                           | <a href="#">APP-061</a>                             |
| Annex 8.2                                     | Cultural Heritage Assessment                                                  | <a href="#">APP-062</a>                             |

#### APPENDIX A: REFERENCE TABLES

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(A:III)

| <b>Environmental Statement<br/>Volume and Chapter</b> | <b>Title</b>                                                                     | <b>Examination Library Reference</b>                                                                                                                                                                          |
|-------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Annex 9.1                                             | Radar Early Warning Systems Technical Report                                     | <a href="#">APP-063</a>                                                                                                                                                                                       |
| Annex 10.1                                            | Seascape, landscape and visual resources legislation and planning policy context | <a href="#">APP-034</a>                                                                                                                                                                                       |
| Annex 10.2                                            | Seascape and landscape character baseline technical report                       | <a href="#">APP-035</a>                                                                                                                                                                                       |
| Annex 10.3                                            | Visual baseline technical report                                                 | <a href="#">APP-036</a>                                                                                                                                                                                       |
| Annex 10.4                                            | Seascape, landscape and visual resources impact assessment methodology           | <a href="#">APP-037</a>                                                                                                                                                                                       |
| Annex 10.5                                            | International and national designated landscape study                            | <a href="#">APP-038</a>                                                                                                                                                                                       |
| Annex 10.6                                            | Seascape Visualisations Parts 1 to 6                                             | <a href="#">APP-039</a> , <a href="#">APP-040</a> , <a href="#">APP-041</a> , <a href="#">APP-042</a> , <a href="#">APP-043</a> , <a href="#">APP-044</a> , <a href="#">PD1-013</a> , <a href="#">PD1-014</a> |
| Annex 11.1                                            | Aviation and Radar Technical Report                                              | <a href="#">APP-045</a>                                                                                                                                                                                       |
| Annex 12.1                                            | Technical Greenhouse Gas Assessment                                              | <a href="#">APP-046</a>                                                                                                                                                                                       |
| Annex 12.2                                            | Climate Change Risk Assessment                                                   | <a href="#">APP-047</a>                                                                                                                                                                                       |
| Annex 13.1                                            | Socio-Economics Technical Impact Report                                          | <a href="#">APP-048</a>                                                                                                                                                                                       |
| Annex 14.1                                            | Airborne Construction Sound Technical Report                                     | <a href="#">APP-049</a>                                                                                                                                                                                       |

#### APPENDIX A: REFERENCE TABLES

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(A:IV)

**APPENDIX A2: Statements of Common Ground between the Applicant and Interested Parties at the end of the Examination**

| Interested Party                                                                                                       | Examination Library Reference |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <b>Final Signed Statements of Common Ground</b>                                                                        |                               |
| BAE Systems (Walney and Warton Aerodromes)                                                                             | <a href="#">REP6-074</a>      |
| Blackpool Airport                                                                                                      | <a href="#">REP6-073</a>      |
| Corporation of Trinity House of Deptford Strond                                                                        | <a href="#">REP6-088</a>      |
| Defence Infrastructure Organisation                                                                                    | <a href="#">REP6-076</a>      |
| Fisheries Stakeholders                                                                                                 | <a href="#">REP6-084</a>      |
| Historic England                                                                                                       | <a href="#">REP6-077</a>      |
| Isle of Man Airport (Ronaldsway)                                                                                       | <a href="#">REP6-085</a>      |
| Isle of Man Government (Territorial Sea Committee)                                                                     | <a href="#">REP6-079</a>      |
| Isle of Man Steam Packet Company                                                                                       | <a href="#">REP6-078</a>      |
| Marine Management Organisation                                                                                         | <a href="#">REP6-081</a>      |
| Maritime and Coastguard Agency                                                                                         | <a href="#">REP6-080</a>      |
| Moor Vannin Offshore Wind Limited                                                                                      | <a href="#">REP6-082</a>      |
| National Federation of Fishermen's Organisations, Welsh Fishermen's Association and Whitehaven Fishermen's Cooperative | <a href="#">REP5-053</a>      |
| NATS (En Route) plc                                                                                                    | <a href="#">REP5-052</a>      |
| Natural Resources Wales                                                                                                | <a href="#">REP6-083</a>      |
| Royal Society for the Protection of Birds                                                                              | <a href="#">REP6-086</a>      |
| Stena Line                                                                                                             | <a href="#">REP6-087</a>      |
| UK Chamber of Shipping                                                                                                 | <a href="#">REP6-075</a>      |
| <b>Unsigned and unprogressed Statements of Common Ground</b>                                                           |                               |
| Chrysaor Resources (Irish Sea) Harbour Energy                                                                          | <a href="#">REP1-031</a>      |
| Orsted Interested Parties                                                                                              | <a href="#">REP2-027</a>      |

## APPENDIX A3: Summary of Relevant Policy, Guidance and Statements

| Title                                                                                                   | Publication Date                  |
|---------------------------------------------------------------------------------------------------------|-----------------------------------|
| British Energy Security Strategy                                                                        | April 2022                        |
| CAP 764: Policy and Guidelines on Wind Turbines (UK Civil Aviation Authority)                           | February 2016                     |
| Clean Power 2030 Action Plan: A new era of clean electricity                                            | December 2024                     |
| Energy White Paper: Powering our Net Zero Future                                                        | December 2020                     |
| Guidance for relevant authorities on seeking to further the purposes of Protected Landscapes            | December 2024                     |
| Marine Guidance Note MGN 654: Guidance on UK Navigational Practice, Safety and Emergency Response (MCA) | April 2021                        |
| National Infrastructure Strategy                                                                        | November 2020                     |
| National Planning Policy Framework                                                                      | December 2024                     |
| National Planning Practice Guidance: Renewable and Low Carbon Energy                                    | June 2015 (updated August 2023)   |
| National Policy Statement for Electricity Networks Infrastructure (NPS EN-5)                            | November 2023                     |
| National Policy Statement for Renewable Energy Infrastructure (NPS EN-3)                                | November 2023                     |
| Net Zero Strategy: Build Back Greener                                                                   | October 2021 (updated April 2022) |
| Net Zero: Opportunities for the Power Sector                                                            | March 2020                        |
| North West Inshore and North West Offshore Marine Plan                                                  | June 2021                         |
| Overarching National Policy Statement for Energy (NPS EN-1)                                             | November 2023                     |
| Powering Up Britain – The Net Zero Growth Plan                                                          | April 2023                        |
| Progress in Reducing UK Emissions: 2024 Report to Parliament (Climate Change Committee)                 | July 2024                         |
| Second National Infrastructure Assessment                                                               | October 2023                      |
| Ten Point Plan for a Green Industrial Revolution                                                        | November 2020                     |
| UK Marine Policy Statement                                                                              | March 2011                        |
| UK Parliament declaration of an Environmental and Climate Change Emergency                              | May 2019                          |
| UK's plans and progress to reach net zero by 2050 (House of commons Research Briefing)                  | September 2024                    |

### APPENDIX A: REFERENCE TABLES

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(A:VI)



## APPENDIX A4: Summary of Relevant Legislation for the Proposed Development

| Title                                                                                                                                                                                                                                | Date Made                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Air Navigation Order 2016                                                                                                                                                                                                            | July 2016                                             |
| Air Navigation (Amendment) Order 2024                                                                                                                                                                                                | October 2024                                          |
| Ancient Monuments and Archaeological Areas Act 1979 (as amended by the National Heritage Acts 1983 and 2002)                                                                                                                         | April 1979                                            |
| Birds Directive (2009/147/EC)                                                                                                                                                                                                        | November 2009                                         |
| Carbon Budget Order 2016                                                                                                                                                                                                             | July 2016                                             |
| Climate Change Act 2008                                                                                                                                                                                                              | November 2008                                         |
| Climate Change Act 2008 (2050 Target Amendment) Order 2019                                                                                                                                                                           | June 2019                                             |
| Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019                                                                                                                                                          | March 2019                                            |
| Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations)                                                                                                                                                     | October 2017                                          |
| Conservation of Offshore Marine Habitats and Species Regulations 2017 (the Offshore Habitats Regulations)                                                                                                                            | October 2017                                          |
| Electricity Act 1989                                                                                                                                                                                                                 | July 1989                                             |
| Energy Acts (2004, 2008, 2013, 2023)                                                                                                                                                                                                 | July 2004, November 2008, December 2013, October 2023 |
| Environment Act 1995                                                                                                                                                                                                                 | July 1995                                             |
| Environment Act 2021                                                                                                                                                                                                                 | November 2021                                         |
| Environmental Assessments and Miscellaneous Planning (Amendment) (EU Exit) Regulations 2018                                                                                                                                          | November 2018                                         |
| Equality Act 2010                                                                                                                                                                                                                    | April 2010                                            |
| Fisheries Act 2020                                                                                                                                                                                                                   | November 2020                                         |
| Human Rights Act 1998                                                                                                                                                                                                                | November 1998                                         |
| Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (EIA Regulations)                                                                                                                            | April 2017                                            |
| International Maritime Organisation: International Convention for the Safety of Life at Sea (SOLAS) 1974 (as amended) given effect in UK law by the Merchant Shipping (Special Measures to Enhance Maritime Safety) Regulations 2024 | November 1974                                         |
| International Maritime Organisation: Convention on International Regulations for Preventing Collisions at Sea 1972                                                                                                                   | October 1972                                          |

### APPENDIX A: REFERENCE TABLES

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(A:VII)

| Title                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Date Made     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| (COLREGS) (as amended) given effect in UK law by the Merchant Shipping Regulations 1996                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |
| International Maritime Organisation: for the Prevention of Marine Pollution from Ships (MARPOL 1973 and protocols 1978 & 1997, as amended) given effect in UK law by the: <ul style="list-style-type: none"> <li>Merchant Shipping (Prevention of Oil Pollution) Order 1983,</li> <li>Merchant Shipping (Prevention of Pollution) (Law of the Sea Convention) Order 1996,</li> <li>Merchant Shipping (Pollution) Act 2006,</li> <li>Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998 (as amended),</li> <li>Merchant Shipping (Prevention of Pollution by Sewage and Garbage) Order 2006 (as amended),</li> <li>Merchant Shipping (Prevention of Air Pollution from Ships) Regulations 2008</li> <li>Merchant Shipping (Prevention of Oil Pollution) Regulations 2019</li> </ul> | November 1973 |
| Levelling up and Regeneration Act 2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | October 2023  |
| Marine and Coastal Access Act 2009                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | November 2009 |
| Merchant Shipping Act 1995                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | July 1995     |
| Natural Environmental and Rural Communities Act 2006 (as amended)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | March 2006    |
| Planning Act 2008                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | November 2008 |
| Planning (Listed Buildings and Conservation Areas) Act 1990                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | May 1990      |
| Protection of Military Remains Act 1986                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | July 1986     |
| Protection of Wrecks Act 1973                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | July 1973     |
| United Nations Convention on Law of the Sea (UNCLOS), acceded to by the UK July 1997                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | December 1982 |
| Wildlife and Countryside Act 1981                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | October 1981  |

#### APPENDIX A: REFERENCE TABLES

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(A:VIII)

**APPENDIX A5: Other Made Development Consent Orders referred to by the Applicant and other Interested Parties**

| <b>Order Name/ Statutory Instrument Number</b>                                           | <b>Date Made</b> |
|------------------------------------------------------------------------------------------|------------------|
| Awel y Mor Offshore Wind Farm Order 2023 / SI 2023 No. 1033                              | September 2023   |
| Dogger Bank Teesside A and B Offshore Wind Farm Order 2015 / SI 2015 No. 1592            | August 2015      |
| East Anglia One North Offshore Wind Farm Order 2022 / SI 2022 No. 432                    | March 2022       |
| East Anglia Two Offshore Wind Farm Order 2022 / SI 2022 No. 433                          | March 2022       |
| Hornsea Three Offshore Wind Farm Order 2020 / SI 2020 No. 1656                           | December 2020    |
| Hornsea Four Offshore Wind Farm Order 2023 / SI 2023 No. 800                             | July 2023        |
| National Grid (Yorkshire Green Energy Enablement Project) Order 2024 / SI 2024 No. 393   | March 2024       |
| Norfolk Boreas Offshore Wind Farm Order 2021 / SI 2021 No. 1414                          | December 2021    |
| Norfolk Vanguard Offshore Wind Farm Order 2020 / SI 2020 No. 706                         | July 2020        |
| Rampion 2 Offshore Wind Farm Order 2025 / SI 2025 No. 468                                | April 2025       |
| Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024 / SI 2024 No. 564  | April 2024       |
| Sizewell C (Nuclear Generating Station) Order 2022 / SI 2022 No. 853                     | July 2022        |
| The Thames Water Utilities Limited (Thames Tideway Tunnel) Order 2014 / SI 2014 No. 2384 | September 2014   |
| Triton Knoll Offshore Wind Farm Order 2013 / SI 2013 No. 1734                            | July 2013        |
| Walney Extension Offshore Windfarm Order 2014 / SI 2014 No. 2950                         | November 2014    |

The following draft Development Consent Orders were also referred to by the Applicant and other Interested Parties:

- Mona Offshore Wind Farm draft Order
- Morecambe Offshore Windfarm Generation Assets draft Order
- Morgan and Morecambe Offshore Wind Farms Transmission Assets draft Order

APPENDIX A: REFERENCE TABLES

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(A:IX)

## APPENDIX B: LIST OF ABBREVIATIONS

| Abbreviation          | Description                                                                           |
|-----------------------|---------------------------------------------------------------------------------------|
| <b>AA</b>             | Appropriate Assessment                                                                |
| <b>ACC</b>            | Area Control Centre                                                                   |
| <b>ADD</b>            | Acoustic Deterrent Device(s)                                                          |
| <b>AEol</b>           | Adverse Effects on Integrity                                                          |
| <b>AEZ</b>            | Archaeological Exclusion Zone                                                         |
| <b>AEP</b>            | Annual Energy Production                                                              |
| <b>AfL</b>            | Agreement for Lease                                                                   |
| <b> AIS</b>           | Automatic Identification System                                                       |
| <b>ALARP</b>          | As Low as Reasonably Practicable                                                      |
| <b>AMSL</b>           | Above Mean Sea Level                                                                  |
| <b>ANCB</b>           | Appropriate Nature Conservation Body                                                  |
| <b>ANIFPO</b>         | Anglo North Irish Fish Producers Organisation                                         |
| <b>APDO</b>           | Approved Procedures Design Organisation                                               |
| <b>ASI</b>            | Accompanied Site Inspection                                                           |
| <b>ATC</b>            | Air Traffic Control                                                                   |
| <b>ATCSMAC</b>        | Air Traffic Control Surveillance Minimum Altitude Chart                               |
| <b>ATS</b>            | Air Traffic Service                                                                   |
| <b>BML</b>            | Bodorgan Marine Limited                                                               |
| <b>CAA</b>            | Civil Aviation Authority                                                              |
| <b>CAP</b>            | Civil Aviation Publication                                                            |
| <b>CEA</b>            | Cumulative Effect Assessment                                                          |
| <b>Cefas</b>          | Centre for Environment Fisheries and Aquaculture Science                              |
| <b>CEMP</b>           | Construction Environmental Management Plan                                            |
| <b>CIS</b>            | Celtic and Irish Seas                                                                 |
| <b>CMS</b>            | Construction Method Statement                                                         |
| <b>CNP</b>            | Critical National Priority                                                            |
| <b>CNS</b>            | Communication Navigation and Surveillance                                             |
| <b>CO<sub>2</sub></b> | Carbon Dioxide                                                                        |
| <b>COLREGs</b>        | The Convention on the International Regulations for Preventing Collisions at Sea 1972 |
| <b>CRM</b>            | Collision Risk Modelling                                                              |
| <b>CRNRA</b>          | Cumulative Regional Navigation Risk Assessment                                        |

### APPENDIX B: LIST OF ABBREVIATIONS

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(B:X)

| <b>Abbreviation</b>  | <b>Description</b>                                                             |
|----------------------|--------------------------------------------------------------------------------|
| <b>CSIP</b>          | Cable Specification and Installation Plan                                      |
| <b>DAERA</b>         | Department of Agriculture, Environment and Rural Affairs (Northern Ireland)    |
| <b>dB</b>            | Decibel                                                                        |
| <b>DCO</b>           | Development Consent Order                                                      |
| <b>DDV</b>           | Drop Down Video                                                                |
| <b>DEFRA</b>         | Department for Environment, Food and Rural Affairs                             |
| <b>DESNZ</b>         | Department for Energy Security and Net Zero                                    |
| <b>DIO</b>           | Defence Infrastructure Organisation                                            |
| <b>DML</b>           | Deemed Marine Licence                                                          |
| <b>EEA</b>           | European Economic Area                                                         |
| <b>EEZ</b>           | Exclusive Economic Zone                                                        |
| <b>EIA</b>           | Environmental Impact Assessment                                                |
| <b>EIA Regs</b>      | The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 |
| <b>EMF</b>           | Electromagnetic Field                                                          |
| <b>EMP</b>           | Environmental Management Plan                                                  |
| <b>EnBW</b>          | Energie Baden-Württemberg AG                                                   |
| <b>ERCoP</b>         | Emergency Response Co-ordination Plan                                          |
| <b>ES</b>            | Environmental Statement                                                        |
| <b>EWG</b>           | Expert Working Group                                                           |
| <b>ExA</b>           | Examining Authority                                                            |
| <b>ExQ</b>           | Examining Authority's written questions (ExQ1, ExQ2)                           |
| <b>FLCP</b>          | Fisheries Liaison and Co-existence Plan                                        |
| <b>FLOWW</b>         | Fishing Liaison with Offshore Wind and Wet Renewables Group                    |
| <b>FMP</b>           | Fisheries Management Plan                                                      |
| <b>GHG</b>           | Greenhouse Gas                                                                 |
| <b>GLVIA</b>         | Guidelines for Landscape and Visual Impact Assessment                          |
| <b>GVA</b>           | Gross Value Added                                                              |
| <b>GW</b>            | Gigawatt                                                                       |
| <b>Habitats Regs</b> | The Conservation of Habitats and Species Regulations 2017                      |
| <b>HAR</b>           | Helicopter Access Report                                                       |
| <b>HAT</b>           | Highest Astronomical Tide                                                      |
| <b>HFoV</b>          | Horizontal Field of View                                                       |
| <b>HND</b>           | Holistic Network Design Review                                                 |

#### APPENDIX B: LIST OF ABBREVIATIONS

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(B:XI)



| <b>Abbreviation</b> | <b>Description</b>                                   |
|---------------------|------------------------------------------------------|
| <b>HPAI</b>         | Highly Pathogenic Avian Influenza                    |
| <b>HRA</b>          | Habitats Regulations Assessment                      |
| <b>IAP</b>          | Initial Assessment of Principal Issues               |
| <b>IEF</b>          | Important Ecological Feature                         |
| <b>IEMA</b>         | Institute of Environmental Management and Assessment |
| <b>IFP</b>          | Instrument Flight Procedures                         |
| <b>IMC</b>          | Instrument Meteorological Conditions                 |
| <b>IoM</b>          | Isle of Man                                          |
| <b>IOMSPC</b>       | Isle of Man Steam Packet Company                     |
| <b>IoM TSC</b>      | Isle of Man (Government) Territorial Sea Committee   |
| <b>IMC</b>          | Instrument Meteorological Conditions                 |
| <b>IMO</b>          | International Maritime Organization                  |
| <b>INNS</b>         | Invasive Non-Native Species                          |
| <b>IP</b>           | Interested Party                                     |
| <b>IPMP</b>         | In-Principle Monitoring Plan                         |
| <b>IROPI</b>        | Imperative Reasons of Overriding Public Interest     |
| <b>ISAA</b>         | Information to Support Appropriate Assessment        |
| <b>ISH</b>          | Issue Specific Hearing                               |
| <b>JNCC</b>         | Joint Nature Conservation Committee                  |
| <b>kg</b>           | Kilogram                                             |
| <b>km</b>           | Kilometre                                            |
| <b>LAT</b>          | Lowest Astronomical Tide                             |
| <b>LCT</b>          | Landscape Character Type                             |
| <b>LIR</b>          | Local Impact Report                                  |
| <b>LoS</b>          | Line of Sight                                        |
| <b>LSE</b>          | Likely Significant Effects                           |
| <b>LURA</b>         | Levelling up and Regeneration Act 2023               |
| <b>LVIA</b>         | Landscape and Visual Impact Assessment               |
| <b>m</b>            | Metre                                                |
| <b>MCA</b>          | Maritime and Coastguard Agency                       |
| <b>MCAA</b>         | Marine and Coastal Access Act 2009                   |
| <b>MCZ</b>          | Marine Conservation Zone                             |
| <b>MDS</b>          | Maximum Design Scenario                              |
| <b>MGN</b>          | Marine Guidance Note                                 |
| <b>MHWS</b>         | Mean High Water Springs                              |

#### APPENDIX B: LIST OF ABBREVIATIONS

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(B:XII)

| <b>Abbreviation</b> | <b>Description</b>                                                |
|---------------------|-------------------------------------------------------------------|
| <b>MLAT</b>         | MultiLATERation                                                   |
| <b>MMMP</b>         | Marine Mammal Mitigation Protocol                                 |
| <b>MMO</b>          | Marine Management Organisation                                    |
| <b>MNEF</b>         | Marine Navigation Engagement Forum                                |
| <b>MNH</b>          | Manx National Heritage                                            |
| <b>MoD</b>          | Ministry of Defence                                               |
| <b>MPA</b>          | Marine Protection Area                                            |
| <b>MPS</b>          | Marine Policy Statement                                           |
| <b>MRF</b>          | Marine Recovery Fund                                              |
| <b>MSA</b>          | Minimum Sector Altitude                                           |
| <b>MU</b>           | Marine Unit                                                       |
| <b>MW</b>           | Megawatts                                                         |
| <b>NATS</b>         | National Air Traffic Service                                      |
| <b>NAS</b>          | Noise Abatement Systems                                           |
| <b>NDHA</b>         | Non-Designated Heritage Asset                                     |
| <b>NFFO</b>         | National Federation of Fishermen's Organisations                  |
| <b>NHV</b>          | Noordzee Helikopters Vlaanderen                                   |
| <b>NIFF</b>         | Northern Ireland Fishermen's Federation                           |
| <b>NM or nm</b>     | Nautical Mile(s)                                                  |
| <b>NIFPO</b>        | Northern Ireland Fish Producers' Organisation                     |
| <b>NPI</b>          | Non-producing installation                                        |
| <b>NPPF</b>         | National Planning Policy Framework                                |
| <b>NPS</b>          | National Policy Statement                                         |
| <b>NPS EN-1</b>     | Overarching National Policy Statement for Energy                  |
| <b>NPS EN-3</b>     | National Policy Statement for Renewable Energy Infrastructure     |
| <b>NPS EN-5</b>     | National Policy Statement for Electricity Networks Infrastructure |
| <b>NPSfP</b>        | National Policy Statement for Ports                               |
| <b>NRA</b>          | Navigational Risk Assessment                                      |
| <b>NRW</b>          | Natural Resources Wales                                           |
| <b>NSIP</b>         | Nationally Significant Infrastructure Project                     |
| <b>NSN</b>          | National Site Network                                             |
| <b>NUI</b>          | Normally Unmanned Installation                                    |
| <b>NWMP</b>         | North West Marine Plan 2021                                       |
| <b>OLS</b>          | Obstacle Limitation Surface                                       |
| <b>OOMP</b>         | Offshore Operations and Maintenance Plan                          |

#### APPENDIX B: LIST OF ABBREVIATIONS

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(B:XIII)

| <b>Abbreviation</b> | <b>Description</b>                                |
|---------------------|---------------------------------------------------|
| <b>OREI</b>         | Offshore Renewable Energy Installation            |
| <b>OSP</b>          | Offshore Substation Platform                      |
| <b>OTNR</b>         | Offshore Transmission Network Review              |
| <b>OUV</b>          | Outstanding Universal Value                       |
| <b>OWEIP</b>        | Offshore Wind Environmental Improvement Package   |
| <b>OWES</b>         | Offshore Wind Environmental Standards             |
| <b>OWF</b>          | Offshore Wind Farm                                |
| <b>PA2008</b>       | Planning Act 2008                                 |
| <b>PADSS</b>        | Principal Areas of Disagreement Summary Statement |
| <b>PEIR</b>         | Preliminary Environmental Information Report      |
| <b>PLEM</b>         | Pipeline End Manifold                             |
| <b>PM</b>           | Preliminary Meeting                               |
| <b>PSED</b>         | Public Sector Equality Duty                       |
| <b>PSR</b>          | Primary Surveillance Radar                        |
| <b>PTS</b>          | Permanent Threshold Shift                         |
| <b>PVA</b>          | Population Viability Analysis                     |
| <b>RAF</b>          | Royal Air Force                                   |
| <b>RAM</b>          | (Vessels) Restricted in Ability to Manoeuvre      |
| <b>RCS</b>          | Radar Cross Section                               |
| <b>REWS</b>         | Radar Early Warning System                        |
| <b>RIES</b>         | Report on the Implications for European Sites     |
| <b>RR</b>           | Relevant Representation                           |
| <b>RSPB</b>         | Royal Society for the Protection of Birds         |
| <b>(s)</b>          | Section (of legislation)                          |
| <b>SAC</b>          | Special Area of Conservation                      |
| <b>SAR</b>          | Search and Rescue                                 |
| <b>SBP</b>          | Sub-Bottom Profiler                               |
| <b>SCA</b>          | Seascape Character Area                           |
| <b>SEL</b>          | Sound Exposure Level                              |
| <b>SELcum</b>       | Cumulative Sound Exposure Level                   |
| <b>SFF</b>          | Scottish Fishermen's Federation                   |
| <b>SoCG</b>         | Statement of Common Ground                        |
| <b>SLVIA</b>        | Seascape landscape visual impact assessment       |
| <b>SMAA</b>         | Surveillance Minimum Altitude Area                |
| <b>SMP</b>          | Seabird Monitoring Programme                      |

APPENDIX B: LIST OF ABBREVIATIONS

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(B:XIV)

| <b>Abbreviation</b>     | <b>Description</b>                                                             |
|-------------------------|--------------------------------------------------------------------------------|
| <b>SMZ</b>              | Scallop Mitigation Zone                                                        |
| <b>SNCB</b>             | Statutory Nature Conservation Body                                             |
| <b>SOLAS</b>            | Safety of Life at Sea Convention                                               |
| <b>SoR</b>              | Statement of Reasons                                                           |
| <b>SoS</b>              | Secretary of State                                                             |
| <b>SPA</b>              | Special Protection Area                                                        |
| <b>SPC</b>              | Steam Packet Company (Isle of Man)                                             |
| <b>SPFA</b>             | Scottish Pelagic Fishermen's Association                                       |
| <b>SPLpk</b>            | Peak Sound Pressure Level                                                      |
| <b>SSC</b>              | Suspended Sediment Concentration                                               |
| <b>SSZ</b>              | Seascape Sensitivity Zone                                                      |
| <b>SSSI</b>             | Site of Special Scientific Interest                                            |
| <b>STCW</b>             | Standards of Training, Certification and Watchkeeping for Seafarers (IMO 1978) |
| <b>SWFPA</b>            | The Scottish White Fish Producers Association Ltd                              |
| <b>tCO<sub>2</sub>e</b> | Tonnes of carbon dioxide equivalent                                            |
| <b>TMZ</b>              | Transponder Mandatory Zone                                                     |
| <b>TTS</b>              | Temporary Threshold Shift                                                      |
| <b>UHF</b>              | Ultra High Frequency                                                           |
| <b>UK</b>               | United Kingdom                                                                 |
| <b>UKCoS</b>            | United Kingdom Chamber of Shipping                                             |
| <b>UKHO</b>             | United Kingdom Hydrographic Office                                             |
| <b>UNCLOS</b>           | UN Convention on the Law of the Sea                                            |
| <b>USI</b>              | Unaccompanied Site Inspection                                                  |
| <b>UWSMS</b>            | Underwater Sound Management Strategy                                           |
| <b>UXO</b>              | Unexploded Ordnance                                                            |
| <b>VHF</b>              | Very High Frequency                                                            |
| <b>VMC</b>              | Visual Meteorological Conditions                                               |
| <b>VMS</b>              | Vessel Monitoring System                                                       |
| <b>VOR</b>              | Valued Ornithological Receptor                                                 |
| <b>VTMP</b>             | Vessel Traffic Management Plan                                                 |
| <b>VTs</b>              | Vessel Traffic Services                                                        |
| <b>WCSP</b>             | West Coast Sea Products Ltd.                                                   |
| <b>WFA</b>              | Welsh Fishermen's Association                                                  |
| <b>WFPO</b>             | Western Fish Producers Organisation                                            |

#### APPENDIX B: LIST OF ABBREVIATIONS

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(B:XV)

| Abbreviation | Description                     |
|--------------|---------------------------------|
| <b>WHPS</b>  | Wellhead Protection Structures  |
| <b>WHS</b>   | World Heritage Site             |
| <b>WR</b>    | Written Representation          |
| <b>WSI</b>   | Written Scheme of Investigation |
| <b>WTG</b>   | Wind Turbine Generator          |
| <b>Zol</b>   | Zone of Influence               |
| <b>ZTV</b>   | Zone of Theoretical Visibility  |

#### APPENDIX B: LIST OF ABBREVIATIONS

Morgan Offshore Wind Project: Generation Assets EN010136

REPORT TO THE SECRETARY OF STATE FOR ENERGY SECURITY AND NET ZERO:

29 May 2025

(B:XVI)

## APPENDIX C: HABITATS REGULATIONS ASSESSMENT

### C.1 INTRODUCTION

- C.1.1 This Appendix sets out the Examining Authority's (ExA's) analysis and conclusions relevant to the Habitats Regulations Assessment (HRA). This will assist the Secretary of State for Energy Security and Net Zero (SoS), as the competent authority, in performing their duties under the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (the Offshore Habitats Regulations).
- C.1.2 This Appendix is structured as follows:
- Section C.2: Stage 1: Findings in relation to Likely Significant Effects (LSE)
  - Section C.3: Conservation Objectives for sites and features
  - Section C.4: Stage 2: Findings in relation to Adverse Effects on Integrity (AEol)
  - Section C.5: HRA conclusions
- C.1.3 Under Regulation 63 of the Habitats Regulations and Regulation 28 of the Offshore Habitats Regulations, the Competent Authority must consider whether a development will have LSE on a European site, either alone or in combination with other plans or projects. The purpose of the LSE test (Stage 1) is to identify the need for an 'appropriate assessment' (AA) to be undertaken by the Competent Authority and the activities, sites or plans and projects to be included for further consideration in the AA (Stage 2). In accordance with the precautionary principle embedded in the Habitats Regulations, consent for the proposed development may be granted only after having ascertained that it will not adversely affect the integrity of European site(s) and no reasonable scientific doubt remains.
- C.1.4 For the purpose of the Report (including this Appendix), the term 'European sites' includes Special Areas of Conservation (SAC), candidate SACs, proposed SACs, Special Protection Areas (SPA), potential SPAs, listed and proposed Ramsar sites and sites identified or required as compensatory measures for adverse effects on any of these sites. The 'UK National Site Network' (NSN) refers to the network of European sites within the UK.
- C.1.5 Policy considerations and the legal obligations under the Habitats Regulations are listed in Appendices A3 and A4 of the Report.
- C.1.6 The ExA has been mindful throughout the Examination of the need to ensure that the SoS has such information as may reasonably be required to carry out their duties as the competent authority. The ExA has sought evidence from the Applicant and the relevant Interested Parties (IPs), including Natural England, Natural Resources Wales (NRW), NatureScot, Northern Ireland's Department of Agriculture, Environment and Rural Affairs (DAERA) and the Joint Nature Conservation Committee (JNCC) as the Appropriate Nature Conservation Bodies (ANCB), through written questions and Issue Specific Hearings (ISHs).

#### **The Applicant's assessment**

- C.1.7 The Applicant submitted a Habitats Regulations Assessment (HRA) Report ('the HRA Report') with its Development Consent Order (DCO) application which comprised the following documents:
- HRA Stage 2 Information to Support an Appropriate Assessment (ISAA) Part 1: Introduction [\[APP-096\]](#)



- ISAA Part 2: SAC assessments [\[APP-097\]](#) ('the HRA Stage 2 SAC Report') and addendum entitled:
  - Assessment of impacts on non-ornithological features of proposed Ramsar sites within the Isle of Man [\[REP5-006\]](#)
- ISAA Part 3: SPA and Ramsar site assessments ('the HRA Stage 2 SPA Report') [\[APP-098\]](#), revised in [\[REP6-066\]](#) and two addenda entitled:
  - Consideration of impacts on ornithological features of Ramsar sites on the Isle of Man [\[REP5-005\]](#)
  - Liverpool Bay/ Bae Lerpwl SPA Clarification Note [\[REP5-036\]](#)
- HRA Stage 1 Screening Report [\[APP-099\]](#), revised in [\[REP6-067\]](#)
- HRA Integrity Matrices [\[APP-100\]](#)

C.1.8 As above, the Applicant submitted revised versions of the HRA Stage 1 Screening Report and HRA Stage 2 SPA Report at D6 [\[REP6-067\]](#) and [\[REP6-066\]](#) respectively], with the only changes to these documents being that Errata Sheets were added.

C.1.9 The HRA Report is supported and informed by several Environmental Statement (ES) appendices referred to therein [\[APP-050\]](#) to [APP-058\]](#).

C.1.10 The HRA Stage 1 Screening Report [\[APP-099\]](#), revised in [\[REP6-067\]](#) identified 71 European sites within the UK NSN for inclusion within the assessment. It identified LSEs for nine UK sites designated for Annex II diadromous fish, 12 UK sites designated for Annex II marine mammals and 32 UK sites designated for offshore ornithology.

C.1.11 The Applicant concluded that the proposed development would not adversely affect the integrity of any of the European sites and features assessed, either alone or in combination with other projects or plans.

#### **Appropriate Nature Conservation Bodies**

C.1.12 The proposed development is located in the Irish Sea within UK waters. The Applicant's HRA Stage 1 Screening Report [\[APP-099\]](#), revised in [\[REP6-067\]](#) identified European sites within the UK NSN that are located within England, Wales, Scotland and Northern Ireland for consideration within the assessment.

C.1.13 Natural England and NRW registered as IPs and participated in the Examination. JNCC did not register as an IP, with Natural England's Relevant Representation (RR) [\[RR-026\]](#) explaining that Natural England is authorised to exercise the JNCC's functions as a statutory consultee in respect of applications for offshore renewable energy installations in offshore waters (0-200nm) adjacent to England (including the application for the proposed development). JNCC participated in the Examination from Deadline (D) 3 onwards in relation to non-English sites for which it has joint or sole responsibility.

C.1.14 In its Rule 6 letter the ExA wrote to NatureScot and the DAERA of Northern Ireland inviting them to the PM as 'Other Persons' [\[PD-001\]](#). The ExA in its first and second written questions [\[PD-004\]](#) and [\[PD-009\]](#) specifically asked NatureScot and DAERA to confirm whether they were content with the outcomes of the Applicant's HRA for the relevant non-English sites. Neither NatureScot or DAERA has responded or submitted any representations to the Examination.

## Non-UK sites

- C.1.15 The HRA Stage 1 Screening Report [\[REP6-067\]](#) also identified the following non-UK European sites for inclusion within the assessment:
- C.1.16 11 Republic of Ireland and 17 French sites designated for Annex II marine mammal qualifying features
- C.1.17 Seven Republic of Ireland sites designated for offshore ornithological features
- C.1.18 Table 1.110 [\[APP-099\]](#), revised in [\[REP6-067\]](#) identifies the non-UK European sites, qualifying features and potential impacts for which the Applicant concluded a LSE. The Applicant's Stage 2 Reports concluded there would be no AEol on all non-UK sites [\[APP-096\]](#), [\[APP-097\]](#), [\[REP6-066\]](#), [\[APP-100\]](#) and this was not disputed by any IP during the Examination.
- C.1.19 The Isle of Man is not covered by the Habitats Regulations but is part of the Ramsar convention. As reported in paragraphs 2.1.16 to 2.1.19 of the Report on the Implications for European Sites (RIES) [\[PD-011\]](#), the ExA considered how effects on the following Ramsar and proposed (p) Ramsar sites located on the Isle of Man had been addressed by the HRA documentation:
- Ballaugh Curragh Ramsar site
  - Central Valley Curragh pRamsar site
  - Dalby Peatlands pRamsar site
  - Gob ny Rona, Maughold Head and Port Cornaa pRamsar site
  - Southern Coasts and Calf of Man pRamsar site
  - The Ayres pRamsar site
- C.1.20 The Applicant's Addendum [\[REP5-005\]](#) to the HRA Stage 2 SPA Report (then [\[APP-098\]](#), revised in [\[REP6-066\]](#)) provided at D5 presented an assessment of ornithological features of the Ballaugh Curragh Ramsar site and pRamsar sites located on the Isle of Man. The addendum identified one additional non-UK site and feature for inclusion in the Stage 2 assessment (the Southern Coasts and Calf of Man pRamsar site – guillemot qualifying feature) as a result of impacts from the proposed development in-combination with other plans and projects [\[REP5-005\]](#). An assessment concluding no AEol was presented in the same document.
- C.1.21 The Applicant's Addendum [\[REP5-006\]](#) to the HRA Stage 2 SAC Report [\[APP-097\]](#) (also provided at D5) presented the assessment of non-ornithological features of the Ballaugh Curragh Ramsar site and pRamsar sites located on the Isle of Man. The addendum identified three additional non-UK sites with marine mammal and fish features for inclusion in the Stage 2 assessment (Gob ny Rona, Maughold Head and Port Cornaa pRamsar site, Southern Coasts and Calf of Man pRamsar site; and The Ayres pRamsar site) as a result of impacts from the proposed development alone and in-combination with other plans and projects [\[REP5-006\]](#). An assessment concluding no AEol was presented in the same document.
- C.1.22 The Isle of Man Government (Territorial Sea Committee) confirmed in [\[REP4-039\]](#) and in its final SoCG with the Applicant (Tables 1.7, 1.10 and 1.11 [\[REP6-079\]](#)) that it agreed with the Applicant's conclusions.
- C.1.23 Only sites within the UK NSN are addressed further in this Appendix.

## **RIES and consultation**

- C.1.24 The ExA produced a RIES [\[PD-011\]](#) which compiled, documented, and signposted HRA-relevant information provided in the DCO application and Examination representations up to D5 (16 January 2025), along with Additional Submissions from NRW (submitted on 30 January 2025 [\[AS-012\]](#)) and the Applicant (submitted on 31 January 2025 [\[AS-013\]](#)). The RIES was issued to set out ExA understanding on HRA-relevant information and the position of the IPs in relation to the effects of the proposed development on European sites at that point in time.
- C.1.25 Consultation on the RIES took place between 6 February 2025 and 27 February 2025. Comments on the RIES were received from the Applicant [\[REP6-013\]](#), Natural England [\[REP6-105\]](#), NRW [\[REP6-101\]](#), JNCC [\[REP6-104\]](#) and the Marine Management Organisation (MMO) [\[REP6-094\]](#) at D6 (27 February 2025). These comments have been taken into account in the drafting of this Appendix.
- C.1.26 A number of Examination submissions at D6 and D7 included HRA-relevant information. Natural England [\[REP6-105\]](#) noted that the RIES did not take account of this information and recommended that the RIES be updated and included within the ExA's Report to the SoS. Natural England advised that consultation on the RIES did not adequately discharge the statutory requirement to consult Natural England on appropriate assessments [\[REP6-105\]](#).
- C.1.27 In accordance with the Inspectorate's NSIP Advice Page: Advice on Habitats Regulations Assessments, the RIES is not revised following consultation and as such the ExA did not republish a revised version. This Appendix considers all HRA representations made by IPs during the Examination, including those made after consultation on the RIES.
- C.1.28 Given the amount of HRA information submitted following publication of the RIES, the SoS may wish to undertake further consultation to fulfil the duties under Regulation 63(3) of the Habitats Regulations and Regulation 28(4) of the Offshore Habitats Regulations.

## **Summary of HRA matters considered during the Examination**

- C.1.29 The Applicant's HRA Report assessed potential impacts on European sites with Annex II diadromous fish species, Annex II marine mammals and offshore ornithological qualifying features. The Examination addressed matters primarily relating to marine mammals and offshore ornithology.
- C.1.30 In respect of marine mammals, the key issues related to behavioural disturbance and the Applicant's proposals for mitigation.
- C.1.31 In respect of offshore ornithology, Natural England, NRW, JNCC and Royal Society for the Protection of Birds (RSPB) raised concerns with the approaches used by the Applicant in various aspects of the assessments. The parties lacked confidence in the Stage 1 and/ or Stage 2 assessments as a result. The ANCBs considered that the assessments should be updated with their advised approach. This resulted in a suite of assessment updates being presented by the Applicant during the Examination. These overarching methodological issues are detailed below.
- C.1.32 In addition to the overarching methodological issues, further matters relating to specific qualifying features and/ or European sites were discussed during the Examination and are detailed below. This Appendix also reports on how the need

for precaution in the assessment due to Highly Pathogenic Avian Influenza (HPAI) was raised.

- C.1.33 A chronological overview of the key documents submitted during pre-Examination and Examination by the Applicant in relation to offshore ornithology is provided in the Sub-appendix to this Appendix (including revisions to the HRA Report).

## **C.2 STAGE 1: FINDINGS IN RELATION TO LIKELY SIGNIFICANT EFFECTS**

### **Relevant UK European sites**

- C.2.1 Section 1.3 of the HRA Stage 1 Screening Report [\[APP-099\]](#), revised in [\[REP6-067\]](#) identified 71 European sites within the UK NSN for inclusion within the assessment, as detailed in the following tables:

- Table 1.4: European sites designated for Annex II diadromous fish species (nine UK European sites shown on Figure 1.4)
- Table 1.5: European sites designated for Annex II marine mammals (15 UK European sites shown on Figure 1.7)
- Table 1.17: European sites designated for offshore ornithological features (47 UK European sites shown on Figure 1.8)

- C.2.2 No European sites designated for Annex I habitats or onshore ornithological features were identified for inclusion in the assessment. This was not disputed by any IPs during the Examination.

- C.2.3 As reported in paragraphs 2.1.6 to 2.1.8 of the RIES [\[PD-011\]](#), Natural England [\[RR-026\]](#), [\[REP1-053\]](#) and NRW [\[RR-027\]](#), [\[REP2-026\]](#) considered that Liverpool Bay SPA should also have been identified for inclusion in the Stage 1 and 2 assessments. This was due to potential disturbance and displacement impacts from vessel movements in the construction or operation and maintenance (O&M) phases on the red-throated diver and common scoter qualifying features. The Applicant's Addendum [\[REP5-036\]](#) to the HRA Stage 2 SPA Report submitted at D5 presented Stage 1 and 2 assessments for the Liverpool Bay SPA. Potential LSEs (alone and in-combination) were identified for the red-throated diver, common scoter and waterbird assemblage qualifying features of Liverpool Bay SPA [\[REP5-036\]](#). A screening matrix for Liverpool Bay SPA was provided in Appendix A of [\[REP5-036\]](#).

- C.2.4 Aside from the Liverpool Bay SPA, no additional European sites within the UK NSN were identified by IPs for inclusion within the screening assessment.

### **Potential impact pathways**

- C.2.5 The HRA Stage 1 Screening Report [\[APP-099\]](#), revised in [\[REP6-067\]](#) detailed the potential impact pathways from the proposed development during construction, O&M and decommissioning. The impact pathways from the proposed development alone are summarised in Table C1 below. The screening matrices within the HRA Stage 1 Screening Report [\[APP-099\]](#), revised in [\[REP6-067\]](#) detail which impact pathways were considered for each European site and qualifying feature (in other words, those greyed out were not assessed by the Applicant).

**Table C1: Pathways for LSE assessed by the Applicant**

| Receptor groups                                                                                                            | LSE pathway                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Annex II diadromous fish species (see Section 1.4.3 of <a href="#">[APP-099]</a> , revised in <a href="#">[REP6-067]</a> ) | <ul style="list-style-type: none"> <li>temporary habitat loss/ disturbance</li> <li>increases in suspended sediment concentrations (SSC) and sediment deposition</li> <li>underwater sound impacting fish</li> <li>long-term habitat loss</li> <li>Electromagnetic Fields (EMF)</li> <li>colonisation of hard structures</li> <li>disturbance/ remobilisation of sediment-bound contaminants</li> <li>accidental pollution</li> </ul>                                                                                                                                                                                             |
| Annex II marine mammals (see Section 1.4.4 of <a href="#">[APP-099]</a> , revised in <a href="#">[REP6-067]</a> )          | <ul style="list-style-type: none"> <li>injury and disturbance from underwater sound generated from piling</li> <li>injury and disturbance from underwater sound generation from unexploded ordnance (UXO) detonation</li> <li>underwater sound from pre-construction site investigation surveys</li> <li>underwater sound from vessels, other vessel activities and other (non-piling) sound producing activities</li> <li>vessel collision risk</li> <li>changes in prey availability</li> <li>increased SSC and associated sediment deposition</li> <li>accidental pollution</li> <li>operational sound</li> <li>EMF</li> </ul> |
| Offshore ornithological features (see Section 1.4.5 of <a href="#">[APP-099]</a> , revised in <a href="#">[REP6-067]</a> ) | <ul style="list-style-type: none"> <li>temporary habitat loss/ disturbance and increased SSC</li> <li>disturbance and displacement from airborne sound and presence of vessels and infrastructure</li> <li>changes in prey availability</li> <li>accidental pollution</li> <li>permanent habitat loss/ disturbance and increased SSC</li> <li>collision risk</li> <li>barrier to movement</li> </ul>                                                                                                                                                                                                                              |

C.2.6 No additional impact pathways were identified for inclusion in the assessment during the Examination.

### **The Applicant's assessment of LSE**

C.2.7 The Applicant's screening conclusions at the point of the DCO application were presented in [\[APP-099\]](#). Screening matrices for each European site considered were provided in Section 1.4. A summary of the European sites, qualifying features and potential impacts for which potential LSEs had been identified was provided in Table 1.110 [\[APP-099\]](#).

### **European sites for which the Applicant concluded no LSE on all qualifying features**

C.2.8 The European sites within the UK NSN for which the Applicant concluded no LSE on all qualifying features, either alone or in combination with other projects or plans, are:

- Annex II marine mammals
  - Monach Islands SAC
  - North Rona SAC
  - Treshnish Isles SAC
- Offshore ornithological features
  - Aukery SPA
  - Burry Inlet SPA
  - Burry Inlet Ramsar site
  - Dee Estuary SPA
  - Dee Estuary Ramsar site
  - Dyfi Estuary/ Aber Dyfi SPA
  - Fair Isle SPA
  - Foula SPA
  - Mousa SPA
  - Priest Island (Summer Isles) SPA
  - Ramna Stacks and Gruney SPA
  - Severn Estuary SPA
  - Severn Estuary Ramsar site
  - Traeth Lafan/ Lavan Sands, Conway Bay SPA
  - Treshnish Isles SPA

C.2.9 In addition to the features identified in the HRA Stage 1 Screening Report, NRW raised [\[RR-027\]](#), [\[REP1-056\]](#) that waterbird assemblages were also qualifying features of the Dee Estuary Ramsar site, Burry Inlet Ramsar site and Severn Estuary Ramsar site, and recommended that the Applicant include an assessment for each assemblage feature. In response, the Applicant confirmed [\[PD1-017\]](#) that its conclusion of no LSE for all features of Dee Estuary Ramsar site, Burry Inlet Ramsar site and Severn Estuary Ramsar site also applied to the waterbird assemblage features at those sites. The Applicant explained [\[REP2-005\]](#) that it had considered assemblage features within the Stage 1 and 2 assessments [\[APP-099\]](#), revised in [\[REP6-067\]](#), and [\[APP-098\]](#), revised in [\[REP6-066\]](#). The Applicant stated that in all cases, conclusions of no adverse effect had been reached with these conclusions also considered applicable to the assemblage feature as a whole [\[REP2-005\]](#).

C.2.10 Aside from this, the Applicant's conclusions of no LSE with respect to the sites listed above were not explicitly disputed in the Examination. However, as noted above, methodological concerns were raised by Natural England, NRW, JNCC and the RSPB in relation to offshore ornithology during the Examination. The overarching methodological concerns are detailed below in this Appendix.

C.2.11 The ExA is content that an LSE on the above sites can be excluded and therefore they are not considered further in this Appendix.

**European sites for which the Applicant concluded LSE on some or all qualifying features**

C.2.12 The application version of the HRA Screening Stage 1 Report [\[APP-099\]](#) identified LSEs (either alone or in combination with other projects or plans) for nine sites



designated for Annex II diadromous fish; 12 sites designated for marine mammals; and 32 sites designated for offshore ornithology. These were identified in Table 2.3 of the RIES [PD-011]. Table 1.110 of the HRA Screening Report [APP-099], revised in [REP6-067] identifies the qualifying feature(s) and impact pathways(s) screened in for each European site for which an LSE was identified.

- C.2.13 As noted, the Applicant also identified LSEs for Liverpool Bay SPA during the Examination [REP5-036] in relation to disturbance/ displacement resulting from airborne sound and the presence of vessels and infrastructure (alone and in combination with other plans and projects).
- C.2.14 The Applicant's revised HRA Stage 1 Screening Report submitted at D6 [REP6-067] was not updated to include Liverpool Bay SPA.
- C.2.15 The Applicant's screening conclusions in respect of Annex II diadromous fish and marine mammals were not disputed during the Examination.
- C.2.16 In respect of offshore ornithology, as reported in Table 2.4 of the RIES [PD-011], NRW [RR-027] and JNCC [REP3-035] considered there were errors in the qualifying features for the Skomer, Skokholm, and seas off Pembrokeshire SPA, noting some species were components of the seabird assemblage. The Applicant [PD1-017] explained it is standard practice to treat assemblage features as standalone and confirmed all features identified by NRW were considered in the HRA Stage 1 Screening Report, with several progressing to Stage 2 assessment. Agreement was subsequently reached with NRW on this matter in [AS-012].
- C.2.17 The ExA [PD-004] sought justification for screening out operational phase barrier effects. The Applicant [REP2-022] and [REP3-006] explained that the likelihood of barrier effects was low due to seabirds' large foraging ranges and distances from the Morgan Array Area. NRW [REP3-051] and Natural England [REP5-080] agreed with this assessment.
- C.2.18 Overarching methodological issues which are applicable to both the Stage 1 and Stage 2 assessments are discussed in Section C.4 of this Appendix.
- In-combination**
- C.2.19 The HRA Screening Report [APP-099], revised in [REP6-067] detailed the Applicant's overarching approach to assessing in-combination effects in Section 1.5.
- C.2.20 The HRA Screening Report stated that it is not necessary to consider in-combination effects at screening stage for sites/ features for which a LSE 'alone' has been identified; rather it is for those where no LSE was concluded. However, the ExA noted that this was contradicted in numerous screening matrices which state that: "Where the additional mortality associated with the Morgan Generation Assets is zero birds or it has been concluded for the project alone that there is no LSE it is considered that the Morgan Generation Assets will not act in-combination with other plans and projects and therefore no LSE is concluded" (for example Table 1.67 note g [APP-099], revised in [REP6-067]).
- C.2.21 In response to ExA questioning, as reported in Table 2.5 of the RIES [PD-011], the Applicant [REP3-006] considered that provision of such an assessment (where this had not been done within the HRA Stage 1 Screening Report) was unnecessary. Due to the highly precautionary approach to the screening of the project alone, the Applicant considered that no additional LSEs were likely to arise as a result of in-combination effects.

- C.2.22 The Applicant's threshold for inclusion of a species within an in-combination assessment was if the proposed development alone resulted in >0.05% increase in baseline mortality. Where the project alone impact equates to <0.05% baseline mortality, the Applicant has deemed it non-material and within natural fluctuations of the population and it is therefore screened out of in-combination assessment.
- C.2.23 Natural England agreed [\[REP3-048\]](#) that for designated sites within English jurisdiction, the likelihood for an in-combination LSE for any site/ feature where the Applicant has excluded an LSE from the project alone is low.
- C.2.24 NRW confirmed at D6 that it was content that all in-combination LSEs for Welsh designated sites had been identified by the Applicant and taken forward to assessment [\[REP6-101\]](#).

#### **LSE assessment conclusions**

- C.2.25 The ExA is satisfied that all relevant European sites and potential impact pathways have been identified and assessed by the Applicant.
- C.2.26 The ExA concludes there would be a LSE from the proposed development alone or in-combination for the following UK European sites, including the qualifying features and impact pathways detailed in Table 1.110 of the HRA Stage 1 Screening Report [\[APP-099\]](#), revised in [\[REP6-067\]](#) and in Appendix A of [\[REP5-036\]](#).

#### **Annex II diadromous fish**

- River Derwent and Bassenthwaite Lake SAC
- River Eden SAC
- River Ehen SAC
- River Kent SAC
- Afon Gwyrfa i Llyn Cwellyn SAC
- Dee Estuary/ Aber Dyfrdwy SAC
- River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC
- River Bladnoch SAC
- Solway Firth SAC

#### **Annex II marine mammals**

- Isles of Scilly Complex SAC
- Lundy SAC
- Bristol Channel Approaches/ Dynesfeydd Môr Hafren SAC
- Cardigan Bay/ Bae Ceredigion SAC
- North Anglesey Marine/ Gogledd Môn Forol SAC
- Pembrokeshire Marine/ Sir Benfro Forol SAC
- Pen Llŷn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC
- West Wales Marine/ Gorllewin Cymru Forol SAC
- Murlough SAC
- Maidens SAC
- North Channel SAC
- Strangford Lough SAC

#### **Offshore ornithological features**

- Bowland Fells SPA
- Flamborough and Filey Coast SPA
- Isles of Scilly SPA
- Isles of Scilly Ramsar

- Morecambe Bay and Duddon Estuary SPA
- Morecambe Bay Ramsar
- Ribble and Alt Estuaries SPA
- Ribble and Alt Estuaries Ramsar
- Irish Sea Front SPA
- Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA
- Grassholm SPA
- Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a moroedd Benfro SPA
- Liverpool Bay/ Bae Lerpwl SPA
- Ailsa Craig SPA
- Buchan Ness to Collieston Coast SPA
- Cape Wrath SPA
- East Caithness Cliffs SPA
- Flannan Isles SPA
- Handa SPA
- Hermaness, Saxa Vord and Valla Field SPA
- Mingulay and Berneray SPA
- North Colonsay and Western Cliffs SPA
- North Rona and Sula Sgeir SPA
- Rum SPA
- Seas off St Kilda SPA
- St Kilda SPA
- Sule Skerry and Sule Stack SPA
- The Shiant Isles SPA
- Troup, Pennan and Lion's Heads SPA
- West Westray SPA
- Forth Islands SPA
- Copeland Islands SPA
- Rathlin Island SPA

### **C.3 CONSERVATION OBJECTIVES**

- C.3.1 The conservation objectives for all of the SACs for which a LSE was identified by the Applicant at the point of the DCO application were included within the HRA Stage 2 SAC Report [\[APP-097\]](#).
- C.3.2 Initially the Applicant only provided conservation objectives for the SPA and Ramsar sites that reached Step 2 of the integrity test in [\[APP-098\]](#) (see Section C.4 below for an explanation of the two step process). In response to a question from the ExA, the Applicant subsequently provided conservation objectives for all the sites for which an LSE has been identified [\[REP4-030\]](#).
- C.3.3 The HRA Stage 2 SAC Report [\[APP-097\]](#) noted that the following SACs are in unfavourable condition:
- River Ehen SAC – freshwater pearl mussel and Atlantic salmon
  - Dee Estuary/ Aber Dyfrdwy SAC – river lamprey and sea lamprey
  - River Kent SAC – freshwater pearl mussel
  - River Bladnoch SAC – Atlantic salmon
  - River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC – Atlantic salmon, river lamprey and sea lamprey
  - Afon Gwyrfai a Llyn Cwellyn SAC – Atlantic salmon
  - River Eden SAC – river lamprey and sea lamprey

- Strangford Lough SAC – harbour seal

C.3.4 The HRA Stage 2 SAC Report [\[APP-097\]](#) noted that condition assessments were not available for the following SACs:

- River Derwent and Bassenthwaite Lake SAC
- Solway Firth SAC
- North Anglesey Marine/ Gogledd Môn Forol SAC
- North Channel SAC
- Murlough SAC
- The Maidens SAC
- Bristol Channel Approaches/ Dynesfeydd Môr Hafren SAC
- Lundy SAC
- Isles of Scilly Complex SAC

C.3.5 The Applicant confirmed in [\[REP3-006\]](#) that it was not aware that condition assessments had become available since the submission of the application for Annex II marine mammals and diadromous fish as features of the SACs identified in the preceding paragraph. This was confirmed by Natural England [\[REP3-048\]](#) and NRW [\[REP3-051\]](#). NRW also stated that they were not likely to be available during the course of the Examination.

C.3.6 In [\[REP4-030\]](#) the Applicant identified that a number of the SPA/ Ramsar sites in the UK NSN were in unfavourable condition:

- Kittiwake feature of North Colonsay and Western Cliffs SPA, Buchan Ness to Collieston Coast SPA, Cape Wrath SPA and Ailsa Craig SPA
- Kittiwake and breeding bird assemblage features of West Westray SPA
- Lesser black-backed gull and breeding seabird assemblage features of Skomer, Skokholm and the Seas off Pembrokeshire SPA
- Breeding seabird assemblage feature of the Shiant Isles SPA and Hermaness, Saxa Vord and Valla Field SPA
- Guillemot, razorbill and breeding seabird assemblage features of the of Handa SPA
- Guillemot, fulmar and Manx shearwater features of the St Kilda SPA
- Guillemot feature of the Flannan Isles SPA

C.3.7 The conservation objectives for Liverpool Bay SPA were provided by the Applicant in [\[REP5-036\]](#). This document stated that the wintering population of red-throated divers within the Liverpool Bay SPA is in unfavourable condition.

## **C.4 STAGE 2: FINDINGS IN RELATION TO ADVERSE EFFECTS ON INTEGRITY**

C.4.1 The European sites and qualifying features for which LSEs were identified were further assessed by the Applicant to determine if they could be subject to AEoI from the proposed development, either alone or in combination. The assessment of AEoI was made in light of the conservation objectives for the European sites.

C.4.2 The Applicant concluded that the proposed development would not adversely affect the integrity of any of the European sites and features assessed, either alone or in combination with other projects or plans. The assessments were summarised in Table 1.187 of [\[APP-097\]](#) for SACs and Table 1.86 of [\[APP-098\]](#) for SPA and Ramsar sites. The Applicant's integrity matrices can be found in [\[APP-100\]](#). As above, the Applicant submitted a revised version of the HRA Stage 2 SPA Report [\[APP-098\]](#) at D6 [\[REP6-066\]](#). The only change to this document was that an Errata Sheet was added; it was not updated to include the results of the new and updated

assessments submitted during the Examination which were presented in other application documents (as referenced below in this Appendix).

C.4.3 The Applicant's approach to in-combination assessment was set out in Section 1.4.5 of the HRA Stage 2 SAC Report [\[APP-097\]](#) and Section 1.4.6 of the HRA Stage 2 SPA Report [\[APP-098\]](#), revised in [\[REP6-066\]](#). The projects included in the in-combination assessments at the point of DCO application were detailed in:

- Annex II diadromous fish: Table 1.30 [\[APP-097\]](#)
- Annex II marine mammals: Table 1.125 [\[APP-097\]](#)
- Offshore ornithology: Table 1.51 [\[APP-098\]](#)

#### **In-combination assessment (general)**

##### **In-combination effects with Morecambe Offshore Windfarm Generation Assets, and Morgan and Morecambe Transmission Assets**

C.4.4 In relation to the in-combination assessment, NRW [\[RR-027\]](#), [\[REP1-056\]](#) and [\[REP6-101\]](#) requested the Applicant to update the data they had included for the Morecambe Generation Assets Project (Morecambe OWF) from the figures from the Preliminary Environmental Information Report (PEIR) for that project to those in the submission documents for the project.

C.4.5 At D2, the Applicant submitted a review of the CEA and in-combination assessment [\[REP2-023\]](#), following acceptance of the Morecambe OWF application for Examination in June 2024. This updated Morecambe OWF to a Tier 1 project and confirmed (Tables 1.4 and 1.5) that with the exception of offshore ornithology, there was no change in the conclusions of the cumulative and in-combination assessments for all topics [\[REP2-023\]](#).

C.4.6 Morecambe OWF was subsequently included in the Applicant's review of the CEA and in-combination assessment for offshore ornithology, submitted at D3 [\[REP3-019\]](#). The submission [\[REP3-019\]](#) concluded that there would be no changes to the conclusions of the in-combination assessments presented in the HRA Stage 2 SPA Report [\[APP-098\]](#), revised in [\[REP6-066\]](#).

C.4.7 At D4, the Applicant submitted a further review of the CEA and in-combination assessment, including the Morgan and Morecambe Transmission Assets [\[REP4-024\]](#). The review concluded that there was no change to the conclusions of the cumulative and in-combination assessments for all receptor groups.

C.4.8 At D5, NRW stated [\[REP5-083a\]](#) that it had reviewed [\[REP4-024\]](#) and had no comments to make at that time.

C.4.9 At D6, the Applicant submitted a further review of the CEA and in-combination assessment [\[REP6-042\]](#). This considered new projects not previously considered in the CEA that had entered the public domain up to 31 January 2025, and new or updated assessment material that has been published on projects up to 31 January 2025 that had been considered in the CEA.

C.4.10 No further comments were received from NRW (or other IPs) on this matter.

##### **In-combination effects with Oriel, North Irish Sea Array, and Arklow Bank Wind Park 2 offshore wind farms**

C.4.11 The HRA documentation did not include these three offshore windfarms in the in-combination assessments for offshore ornithology and Annex II diadromous fish.

Meath County Council responded to the SoS's transboundary consultation under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 [OD-006] stating applications had been submitted for these three projects.

C.4.12 The Applicant's reviews of the CEA and in-combination assessments at D2 [REP2-023] and D3 [REP3-019] considered these three projects, as well as Codling Offshore Wind Farm and Llŷr floating offshore wind project (for which applications had also been submitted). The reviews concluded that there was no change in the conclusions of the cumulative and in-combination assessments for all topics.

C.4.13 Meath County Council confirmed at D5 [REP5-100] that it had no further comments to make at that time and submitted no further submissions to the Examination.

#### **Offshore ornithology methodological concerns**

C.4.14 Section 1.4.7 and Figure 1.1 of the HRA Stage 2 SPA Report [APP-098], revised in [REP6-066] explained that for SPAs/ Ramsar sites, a two-step process was followed for assessing effects on the integrity of sites for which a LSE was identified. In brief:

- Step 1 – comprised a high-level assessment, based on apportioning data, to identify where there is a low risk of an AEoI (in other words, predicted impacts for the proposed development alone and/or in-combination cause a <1% increase in the baseline mortality of the latest population estimate for a qualifying feature).
- Step 2 - was for sites for which it is predicted that there would be an increase in baseline mortality of particular qualifying features of >1%. It comprised a more detailed assessment, based on collision risk modelling and displacement assessments to examine impacts against each conservation objective for the relevant SPAs/ Ramsar sites.

C.4.15 At the point of DCO application, the sites and qualifying features which were taken forward to the Step 2 assessment were:

- Morecambe Bay and Duddon Estuary SPA/ Morecambe Bay Ramsar site – herring gull and breeding seabird assemblage (herring gull component feature)
- Ireland's Eye SPA – kittiwake
- Rathlin Island SPA – breeding seabird assemblage (guillemot component feature) (later corrected by the Applicant – see below)
- Isles of Scilly SPA/ Ramsar site – great black-backed gull (non-breeding season) and breeding bird assemblage (great black-backed gull component feature)
- Cape Wrath SPA – kittiwake and breeding seabird assemblage (kittiwake component feature)
- Flannan Isles SPA – guillemot (non-breeding season) and breeding seabird assemblage (guillemot component feature)
- North-West Irish Sea SPA – kittiwake

C.4.16 Section 1.4.6 of the HRA Stage 2 SPA Report [APP-098], revised in [REP6-066] detailed the Applicant's general approach to the in-combination assessment for SPA/ Ramsar sites. Section 1.4.7 of the HRA Stage 2 SPA Report [APP-098], revised in [REP6-066] stated that where the proposed development alone represents an impact of <0.05% increase in baseline mortality of the relevant SPA population, it is considered that the impact is not measurable and is within the natural limits of variation and so would not be considered in an in-combination



assessment. In-combination assessments therefore were only undertaken for the following UK SPAs/ Ramsar sites and features:

- Morecambe Bay and Duddon Estuary SPA/ Morecambe Bay Ramsar site – in-combination impacts from collision risk during operation and maintenance to herring gull
- Ireland's Eye SPA – in-combination impacts from displacement, collision and their combined effects on kittiwake
- Isles of Scilly SPA/ Ramsar site – in-combination impact from collision risk to great black-backed gull (non-breeding season)
- Flannan Isles SPA – in-combination impact from combined effects from disturbance and displacement from airborne noise, underwater sound, and presence of vessels and infrastructure impacts to guillemot (non-breeding season)
- Cape Wrath SPA – in-combination and collision risk and combined impacts from collision and displacement to kittiwake (it is noted that there is a discrepancy in Table 1.46 of [\[APP-098\]](#) where it states that kittiwake are not progressed to Step 2)

C.4.17 The projects included in the in-combination assessments at the point of DCO application were detailed in Table 1.51 and Figure 1.3 [\[APP-098\]](#).

C.4.18 A number of methodological concerns regarding the offshore ornithology assessment were raised by the ExA, Natural England, JNCC and NRW and subsequently resolved during the Examination, as detailed below. Methodological concerns raised by the RSPB are also detailed below.

C.4.19 The Applicant's updates to the assessment as a result of these concerns resulted in additional SPAs/ features being progressed to Step 2 of the ISAA process, which had previously only been considered at Step 1 of the ISAA process in the HRA Stage 2 SPA Report [\[APP-098\]](#), revised in [\[REP6-066\]](#) and not progressed to Step 2:

- Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a moroedd Benfro SPA - guillemot feature
- a number of Scottish SPAs (North Colonsay and Western Cliffs SPA; Handa SPA; St Kilda SPA; Cape Wrath SPA; and Suke Skerry and Sule Stack SPA) – guillemot feature

C.4.20 As a result of the additional Step 2 assessments presented in [\[REP1-011\]](#), there was no change to the overall conclusion of no AEoI reached in the HRA Stage 2 SPA Report [\[APP-098\]](#), revised in [\[REP6-066\]](#).

#### **Initial positions**

C.4.21 Natural England [\[RR-026\]](#) held the initial position that it was unable to comment on the assessment conclusions on the basis that the methodology of assessment deviated from ANCB advice, undermining the viability of the conclusions. Natural England was not satisfied that it could be excluded beyond reasonable scientific doubt that the proposed development would have an AEoI, alone or in-combination, on the following sites:

- Liverpool Bay SPA
- Morecambe Bay and Duddon Estuary SPA and Ramsar site
- Ribble and Alt Estuaries SPA and Ramsar site
- Bowland Fells SPA

- Isles of Scilly SPA
- Flamborough and Filey Coast SPA

C.4.22 Similarly, NRW's position early in the Examination was that it was unable to confirm definitively whether an adverse effect, beyond reasonable scientific doubt, could be ruled out for any European site in its remit [REP3-051]. It agreed with Natural England that the methodology was unclear and required clarification before agreement could be reached.

C.4.23 JNCC [REP3-035] did not initially agree to no AEol on features of Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a moroedd Benfro SPA due to shared concerns with Natural England and NRW about the methodology, including:

- incorrect SPA features identified
- the seasonal definition used for black-legged kittiwake
- age class apportioning of black-legged kittiwake
- the use of only specific displacement rates and mortality rates, rather than a range of rates, in the HRA displacement assessment

C.4.24 However, the JNCC [REP3-035] agreed with no AEol for features of Irish Sea Front SPA and Seas off St Kilda SPA, both alone and in-combination. JNCC also agreed [REP3-035] that on the basis of the measures set out in Section 1.3 of the document 'Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels' [APP-070], revised in [REP5-046] secured through the draft Deemed Marine Licences (DMLs) (Condition 20) [REP7-007], an AEol could be ruled out for non-breeding red-throated diver and common scoter qualifying features of the Liverpool Bay SPA.

C.4.25 The RSPB [RR-035], [REP1-057] did not agree with the conclusion of no AEol for collision impacts arising from the project alone and in combination with other projects due to concerns about the methodology incorporating historical data. For the project alone, they did not agree there would be no AEol on Manx shearwater of the following sites:

- Irish Sea Front SPA
- Copeland Islands SPA
- Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA
- Skomer, Skokholm and the Seas off Pembrokeshire/ Sgomer, Sgogwm a Moroedd Penfro SPA
- Rum SPA
- Isles of Scilly SPA
- St Kilda SPA

C.4.26 The RSPB [REP1-057] considered that there would be an AEol on great black-backed gull of the Isles of Scilly SPA, from the proposed development in-combination with other plans or projects. Due to methodological concerns, the RSPB also did not agree that AEol could be ruled out for "a range of species/ SPA combinations" (not specified) resulting from collision impacts and distribution change, from the proposed development in combination with other plans or projects [REP1-057].

#### **Worst-case scenario**

C.4.27 The ExA (ExQ1 HRA 1.3 [PD-004]) queried whether the HRA had assessed the worst-case scenario and requested assurances that the impacts of greater

magnitude than have been assessed would not occur. The ExA pointed out the HRA assesses up to 96 wind turbines with a maximum diameter of 250m and a maximum blade tip above Lowest Astronomical Tide (LAT) of 293m. Schedule 2 of the draft DCO [REP2-011] allows up to 96 turbines with a maximum rotor diameter of 320m and maximum blade tip height above LAT of 364m.

- C.4.28 The Applicant confirmed [REP3-006] that the maximum design scenario involves the highest number of turbines (96) and the largest physical footprint, consistent with previous offshore wind farm applications. To prevent building 96 turbines with the maximum rotor diameter (320m), the maximum rotor swept area was specified in the draft DCO (Schedule 2, Requirement 2(2), Table 1) [REP7-007].

#### **Highly Pathogenic Avian Influenza**

- C.4.29 The RSPB [RR-035], [REP5-091] raised concerns that the implications of HPAI had not been adequately considered in the HRA assessments and set out the consequences that should be considered in the assessment including the impact on characterisation of the baseline environment, alterations to extent of interactions with wind farms and changes in robustness of protected population to additional mortality. Natural England [RR-026], [REP1-053] stated that the recent seabird population trends section of the Applicant's Offshore Ornithology Baseline Characterisation [APP-053], revised in [REP1-026] does not consider the impacts of HPAI in the region, but presented this in its Risk and Issues Log only as a note to Examiners and/ or the competent authority and did not add further comment to the Log.
- C.4.30 The ExA in ExQ1, MO 1.8 [PD-004] sought clarity from the Applicant around how HPAI had been considered and queried whether the RSPB considered any additional information or assessment was required from the Applicant regarding HPAI effects. The Applicant confirmed [REP3-006] that HPAI had been considered in its application documents following Natural England guidance. It stated that there are no large breeding seabird colonies near the proposed Morgan Generation Assets, so HPAI likely hasn't impacted local populations and the HRA Stage 2 assessments use recent population sizes, considering post-HPAI effects. Few HPAI cases were reported in breeding seabirds in 2024, with some colonies showing improved breeding numbers however, it considers longer datasets are needed to determine HPAI's impact on breeding productivity [REP3-006].
- C.4.31 At Examination close, the RSPB's concerns with the impact assessment methodology relating to HPAI remained outstanding [REP5-091], [REP6-086].

#### **In-combination assessment - historical projects**

- C.4.32 Natural England [RR-026], [REP1-053] and NRW [RR-027], [REP3-051] considered that the Applicant had not included the gap-filled projects in its cumulative and in-combination assessments for offshore ornithology. They pointed out that impacts specified as 'unknown' had been assessed qualitatively but treated as zero, which they considered would underestimate impacts and affect future assessments.
- C.4.33 In an effort to resolve these concerns, the Applicant submitted a gap-filling exercise for historic projects [REP1-010] at D1 and its reviews of the cumulative and in-combination assessments at D3 [REP3-019] and D4 [REP4-024].
- C.4.34 At D5, the Applicant submitted updated in-combination assessments for impacts on herring gull as a feature of Morecambe Bay and Duddon Estuary SPA, and for great black-backed gull as a feature of the Isles of Scilly SPA [REP5-031], [REP5-032],

[REP5-033] (later superseded by [AS-013]), [REP5-034] and [REP5-035]. These included impact values for historical projects that were not included in the original assessment or were assessed qualitatively and have now been calculated in line with the advised approach provided by Natural England and NRW.

C.4.35 Natural England [REP5-079] confirmed that this has addressed its concerns. Natural England's agreement was on the proviso that the figures that the Applicant presented to the Examination at D5, were in accordance with the figures shared with them in advance of D5. The Applicant confirmed at D6 [REP6-013] that the figures were identical.

C.4.36 Following submission of the Applicant's updated in-combination assessments, NRW confirmed in [AS-012] that it could conclude no AEoI alone or in-combination for all Welsh SPAs. NRW's agreement in [AS-012] was on the proviso that the updated figures submitted to the Examination by the Applicant [AS-013] are in accordance with the figures received by NRW on 27 January 2025. The Applicant confirmed at D6 [REP6-013] that the figures were identical.

#### **Collision risk assessment - seasonal definitions**

C.4.37 JNCC [REP3-035] and NRW [REP1-056] did not agree with splitting monthly collision impacts across two different seasons for kittiwake on the basis that it would result in different seasonal impacts being apportioned to SPAs in the HRA. They advised the full breeding season should be used and that other seasons are adjusted accordingly to ensure no months are considered in two seasons.

C.4.38 The Applicant acknowledged this and incorporated it into the updated assessments at D5 [REP5-032], [REP5-033] (later superseded by [AS-013]), [REP5-034], and [REP5-035].

#### **Collision risk assessment - apportioned collision risk modelling impacts and avoidance rates and flight speeds from the project alone**

C.4.39 There was disagreement between the Applicant [APP-099], [REP3-018], [REP4-009], [REP5-012], Natural England [RR-026], [REP3-049], RSPB [REP1-057] and NRW [RR-027] over the data used for flight speeds and the use of 95% confidence intervals with consultees stating that it did not align with ANCB advice. At D6 Natural England [REP6-105] confirmed its agreement with the use of 95% confidence intervals and that its concerns were around the novel screening approach. For other projects requiring compensation, Natural England generally advises scaling seabird compensatory measures against the 95% value instead of the central value to ensure that compensatory measures provide sufficient benefit even if impacts exceed the central prediction. However, it considers this to be a minor issue that would not undermine the conclusions of the assessment for the proposed development.

C.4.40 NRW [REP6-083] stated that following discussions with the Applicant, a compromise solution was reached on agreeing the approach in the assessment with the caveat that this approach is suitable for this project and for impacts from the project alone and may not be appropriate for all offshore wind cases.

#### **Apportionment - sabbatical birds**

C.4.41 Natural England raised concerns that sabbatical birds had been excluded from assessments during apportioning, advising that integrity judgments should include these birds [RR-026] and [REP1-053]. The Applicant responded, confirming that the

impact of sabbatical birds was considered qualitatively and not included in apportioning calculations, aligning with Natural England's recommendations [PD1-017]. Natural England was broadly content with this response and advised updating the assessment wording accordingly, considering the matter closed at D3 [REP3-048], [REP3-049] and [REP6-100]. The Applicant clarified that the requested text was already included in the relevant reports, providing cross-references [REP5-015].

#### **Apportionment - age class apportionment**

- C.4.42 Natural England [RR-026], [REP2-033] and NRW [RR-027], [REP1-056] did not agree with the Applicant's approach to age class apportioning for kittiwakes using a method developed by Hornsea Project Two and advised that a more appropriate approach for age-apportioning kittiwakes in the breeding season would be to use the 84.11% of adults recorded in the Morgan site-specific Digital Aerial Survey data. Alternatively, Natural England advised taking a precautionary approach and assume all birds are adults. JNCC raised similar concerns [REP3 035].
- C.4.43 JNCC [REP3-035] and NRW [REP1-056] also did not agree with splitting monthly collision impacts across two different seasons for kittiwake on the basis that it would result in different seasonal impacts being apportioned to SPAs in the HRA. They advised the full breeding season should be used and that other seasons are adjusted accordingly to ensure no months are considered in two seasons.
- C.4.44 The Applicant submitted clarification notes [REP3-020], [REP4-031] in response stating that the preferred approach in assuming all birds are adult class had been used and the conclusions were not affected. Natural England [REP4-043] and NRW [REP4-044] considered that the correct approach had still not been applied.
- C.4.45 The Applicant submitted updated impact figures at D5 [REP5-032], [REP5-033] (superseded by [AS-013]), [REP5-034] and [REP5-035] in effort to resolve these concerns.
- C.4.46 NRW [REP5-083] confirmed at D5 that the Applicant had updated its assessments accordingly following the ANCB advised approaches for kittiwake apportioning by assuming all birds are adult age class. JNCC confirmed at D5 [REP5-067] that it had no outstanding methodological issues with the application, subject to confirmation that the figures that the Applicant presented to the Examination at D5, were in accordance with the figures shared with them in advance of D5. The Applicant confirmed in [REP6-013] that the figures were identical.
- C.4.47 Natural England [REP6-100] confirmed at D6 that it agreed with the impact figures, that the apportioning assessment had used the ANCB advised method for age-apportioning kittiwakes in the breeding season and it considered the issue resolved.

#### **Apportionment - Seabirds Count data for breeding seasons**

- C.4.48 Natural England [REP1-056] advised that Seabirds Count data should be used for apportioning to colonies in the breeding season and requested an updated assessment to reflect this.
- C.4.49 The Applicant provided additional information in [REP1-011], [REP1-012] and [REP2-021]. Following further consultation with Natural England, the Applicant submitted a revised assessment to incorporate apportioning values calculated using data from the Seabirds Count at D5 [REP5-032], [REP5-033] (later superseded by [AS-013]), [REP5-034] and [REP5-035].



- C.4.50 Natural England [\[REP5-079\]](#) confirmed that its concerns have been addressed.
- Displacement assessments - displacement and mortality rates, project alone and in-combination**
- C.4.51 Natural England [\[RR-026\]](#), [\[REP5-082b\]](#), JNCC [\[REP3-035\]](#), RSPB [\[REP1-057\]](#) and NRW [\[RR-027\]](#), [\[REP1-056\]](#) did not consider the Applicant's use of single values of 50% displacement and 1% mortality to be appropriate. They advised that a range of displacement rates (30-70%) and mortality ranges (1-10%) should be considered throughout the assessments.
- C.4.52 In updating the assessment, the Applicant identified [\[REP1-011\]](#) additional SPAs/ features to progressed to Step 2 of the ISAA process (as detailed above), but there was no change to the overall conclusion of no AEol reached in the HRA Stage 2 SPA Report [\[APP-098\]](#), revised in [\[REP6-066\]](#).
- C.4.53 Natural England [\[REP4-042\]](#) and NRW [\[REP4-044\]](#) considered that the comparison of figures between the Applicant's approach versus the ANCB advised approach for the Band model options provided in [\[REP3-018\]](#) is 'stress-testing' and maintained that the required update should be applied. Both parties considered that a site/ feature combination should be taken through to in-combination assessments where the project alone predicted impact exceeds 0.05% of baseline mortality at any scenario across the full range of advised rates.
- C.4.54 At D5 the Applicant provided a number of updated assessments [\[REP5-032\]](#), [\[REP5-033\]](#) (superseded by [\[AS-013\]](#)), [\[REP5-034\]](#) and [\[REP5-035\]](#) to align with the recommended methodology including the advised ranges of displacement and mortality rates.
- C.4.55 At D6 [\[REP6-100\]](#) Natural England agreed that the Applicant's updated assessments follow an advised methodology and that this matter has been resolved. NRW [\[REP6-101\]](#) confirmed that the Applicant had presented impacts for the relevant Welsh SPAs covering the full range of NRW advised rates: 30-70% displacement for auks and Manx shearwater and 60-80% displacement for gannet and 1-10% mortality for all species. NRW agreed that AEol could be ruled out for the project alone and in-combination for all relevant Welsh SPAs.
- C.4.56 JNCC [\[REP6-104\]](#) confirmed that the appropriate ranges of displacement and mortality have been presented for black-legged kittiwake, Manx shearwater, common guillemot and razorbill.
- C.4.57 At Examination close, RSPB [\[REP6-086\]](#) continued to disagree that an AEol can be ruled out for the great black-backed gull as a feature of the Isles of Scilly SPA from collision and displacement mortality in-combination effects. Due to resource constraints, the RSPB was unable to review and conclude on the information provided by the Applicant at D5 [\[REP5-032\]](#) and [\[REP5-035\]](#).
- Combined displacement and collision risk - presentation of kittiwake and gannet collision and displacement impacts separately as well as combined, from project alone**
- C.4.58 The Applicant [\[APP-023\]](#), [\[APP-099\]](#) and [\[APP-098\]](#) presented the collision and displacement impacts for kittiwake and gannet as combined. NRW [\[REP1-056\]](#) and Natural England [\[REP1-053\]](#) agreed that displacement impacts for kittiwake do not need to be assessed. They considered that collision and displacement impacts to



kittiwake should be presented separately, as well as combined, with NRW also raising this point in relation to gannet.

C.4.59 The Applicant responded [\[REP2-005\]](#) that impact estimates were used in the HRA Stage 1 Screening Report [\[APP-099\]](#) to identify where apportioned impacts represented more than zero and that for Step 1 in the HRA Stage 2 SPA Report [\[APP-098\]](#), the same reasoning applied. The purpose of this step was to identify whether any impact, whether this be collision or displacement (alone or combined) surpasses the 1% threshold of baseline mortality of the SPA population [\[REP2-005\]](#).

C.4.60 The Applicant stated [\[REP2-005\]](#) that the assessments of combined displacement and collision risk impacts were only required in Step 2 of the assessment in the HRA Stage 2 SPA Report [\[APP-098\]](#) for kittiwake at Ireland's Eye SPA and Cape Wrath SPA and signposted to the relevant sections. The Applicant stated it had provided detailed reports on displacement mortality, collision risk estimates, and apportioning rates for relevant SPAs, allowing for future impact assessments if needed.

C.4.61 At D5, the Applicant submitted its updated assessments to the Examination [\[REP5-032\]](#), [\[REP5-033\]](#), [\[REP5-034\]](#) and [\[REP5-035\]](#). Both Natural England [\[REP5-079\]](#) and NRW [\[REP5-083a\]](#) and [\[AS-012\]](#) agreed that an AEol could be ruled out for all English and Welsh SPAs for the project alone, based on the updated impact figures the Applicant had shared with them in advance of D5 and updated figures for Welsh SPAs received by NRW on 27 January 2025 (subsequently submitted to the Examination in [\[AS-013\]](#) (rev 2), superseding [\[REP5-033\]](#) (rev 1)). The Applicant subsequently confirmed [\[REP6-013\]](#) that these were identical to the figures submitted to the Examination.

### **Methodological Summary**

C.4.62 All methodological concerns detailed above regarding the offshore ornithology assessment which were raised by the ExA, Natural England, JNCC and NRW were resolved during the Examination. However, methodological concerns remain unresolved with RSPB in relation to in-combination displacement assessments for great black-backed gull as a feature of the Isles of Scilly SPA and the assessment of impacts from HPAI.

### **Mitigation**

C.4.63 The Applicant's HRA Stage 2 Reports identified mitigation measures for each receptor group as follows:

- Annex II diadromous fish species – Tables 1.8 and 1.20 of [\[APP-097\]](#)
- Annex II marine mammals – Tables 1.56 and 1.123 of [\[APP-097\]](#)
- offshore ornithology – Table 1.6 of [\[APP-098\]](#)

C.4.64 These were taken into account in the Applicant's assessment of effects on integrity.

C.4.65 These measures include the development and adherence to a MMMP, to be based on the Outline Marine Mammal Mitigation Protocol (MMMP) [\[REP6-047\]](#), in the event that driven or part-driven pile foundations are used. Whilst this protocol was developed primarily to reduce or eliminate the risk of auditory injury effects of underwater sound to marine mammals during construction, the Applicant considered these measures also applicable to fish species.

C.4.66 An Underwater Sound Management Strategy (UWSMS), to be based on the Outline UWSMS [\[REP6-045\]](#), would also be produced prior to piling activities or unexploded

ordnance clearance. This would provide a strategy to reduce the magnitude of impacts from elevated underwater sound to marine mammal and fish receptors and would consider both auditory injury and behavioural disturbance.

- C.4.67 The Outline MMMP and Outline UWSMS as submitted with the DCO application were updated throughout the Examination in response to comments from the ANCBs and other parties.
- C.4.68 Text was added to the Outline MMMP to clarify that Acoustic Deterrent Devices would not be used as a mitigation measure for geophysical surveys (in line with a request from Natural England [\[RR-026\]](#)) and to reflect the Applicant's response to ExQ1 MM 1.3 [\[REP3-006\]](#) that it was unnecessary for the draft DML Conditions to refer to measures for injurious effects and disturbance from geophysical activities. Natural England [\[REP5-080\]](#) and the MMO [\[REP5-056a\]](#) confirmed that they were satisfied with the Applicant's response to ExQ1 MM 1.3. NRW [\[REP5-083\]](#) deferred to the MMO.
- C.4.69 Natural England considered that due to potential impacts on harbour porpoise, appropriate mitigation for underwater sound during Sub-Bottom Profiler (SBP) surveys should be included in the MMMP and UWSMS, following the JNCC guidelines for minimising the risk of injury to marine mammals from geophysical surveys (JNCC, 2017) [\[RR-026\]](#), [\[REP1-053\]](#), [\[REP3-049\]](#). Natural England referenced new data collected in Wales which showed that SBP surveys cause marked and prolonged reduction in acoustic porpoise detection. As harbour porpoise are not a qualifying feature of the SACs in English waters which have been considered in the Applicant's assessment of effects on integrity, this matter is not considered further in this Appendix. The ExA has reached a conclusion on the scope and suitability of the Applicant's proposed monitoring for marine mammals in Section 3.8 of this Report.
- C.4.70 At D5, in response to stakeholder concerns the Applicant committed to low order UXO clearance only (removing the option of high order UXO clearance from the draft DCO ([\[REP5-017\]](#), now [\[REP7-007\]](#)). The Applicant confirmed (ExQ2 GEN 2.2 and MM 2.8 [\[REP5-015\]](#)) that it would need to apply for a separate Marine Licence should there be a requirement to undertake UXO clearance using high order clearance methods.
- C.4.71 Updated documents including the Outline MMMP [\[REP6-047\]](#) and Outline UWSMS [\[REP6-045\]](#) were submitted by the Applicant at D6, to reflect its commitment to the use of noise abatement systems (NAS) as mitigation, in view of the DEFRA noise policy paper published 21 January 2025. These were the final outline versions of these documents. By close of the Examination, Natural England [\[AS-015\]](#) was content that the Applicant had committed at D6 to the use of NAS in-line with the DEFRA marine noise policy paper (published 21 January 2025), and that a commitment to the use of NAS if piling is required within the DCO was secured.
- C.4.72 The submission of the MMMP and UWSMS (in accordance with the Outline MMMP and Outline UWSMS) for approval by the MMO is secured through draft DML Part 2 Conditions 20, 22 and 23 in the final draft DCO [\[REP7-007\]](#). The final Outline MMMP [\[REP6-047\]](#) and Outline UWSMS [\[REP6-045\]](#) would be certified documents under Schedule 5 of the draft DCO [\[REP7-007\]](#).
- C.4.73 Measures to minimise disturbance to marine mammals (and rafting birds) from transiting vessels are described in [\[REP5-046\]](#) and would be included in the Offshore Environmental Management Plan (EMP). An Outline Offshore MP was

submitted during the Examination [REP4-018]. Submission of an Offshore EMP, which accords with the outline version, is secured through the draft DMLs (Condition 20) [REP7-007]. The outline Offshore EMP [REP4-018] is included within the list of documents to be certified under Schedule 5 of the draft DCO [REP7-007].

C.4.74 The Applicant provided an Outline Offshore Construction Method Statement (CMS) (incorporating an Outline Cable Specification and Installation Plan (CSIP)) at D4 [REP4-032]. Table 5.3 of the document confirmed that that “*The Cable Specification and Installation Plan (CSIP) will include measures for cable burial where possible...*”, which would avoid adverse effects on Annex II diadromous fish from EMF. Condition 20(1)(d) within the draft DMLs references the Outline Offshore CMS and it is also included within the list of documents to be certified under Schedule 5 of the draft DCO [REP7-007].

C.4.75 In relation to offshore ornithology, the Applicant committed to a minimum lower blade tip height of 34m above LAT to be secured through the draft DCO (Schedule 2 (2) Table 1 [REP7-007]) to mitigate impacts from collision risk. The conclusions of the assessment also relied on an Offshore EMP as described above, to include measures to minimise disturbance to rafting birds from transiting vessels and a Marine Pollution Contingency Plan.

#### **Sites for which AEoI can be excluded**

##### **Sites and features where no concerns were raised**

C.4.76 The Applicant concluded that the proposed development would not result in AEoI of any of the European sites assessed.

C.4.77 At the close of the Examination, the Applicant’s conclusions had not been disputed by any IP in relation to the Annex II diadromous fish and marine mammal sites and features listed in Table C2 below. The ExA is satisfied that the correct impacts have been assessed for these sites and features, and that the scope of the Applicant’s in-combination assessment for Annex II diadromous fish and marine mammals is correct and no additional plans or projects need to be considered.

C.4.78 The ExA is satisfied that on the basis of the information provided, an AEoI on the sites and features listed in Table C2 below can be excluded. The complete details of these sites are provided in Table C2 below.

C.4.79 Although not all sites with offshore ornithological features were explicitly identified and individually discussed in the Examination, the ExA understands the overarching methodological concerns relate to the assessment of all offshore ornithological sites; hence offshore ornithological sites are not included in the table below.

**Table C2: European sites for which the Applicant concluded no AEol and for which no IPs raised concerns**

| European site(s)                         | Qualifying Feature(s)                                                                                         | AEol alone OR in-combination                                                 | Mitigation required to avoid AEol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Evidence of agreement of no AEol Evidence of agreement of no AEol |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| <b>Annex II diadromous fish</b>          |                                                                                                               |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                   |
| River Derwent and Bassenthwaite Lake SAC | <ul style="list-style-type: none"> <li>Atlantic salmon</li> <li>Sea lamprey</li> <li>River lamprey</li> </ul> | No – see section 1.5 of the HRA Stage 2 SAC Report <a href="#">[APP-097]</a> | <ul style="list-style-type: none"> <li>A MMMP, to be based on the Outline MMMP <a href="#">[REP6-047]</a>, in the event that driven or part-driven pile foundations be used. Table 1.8 <a href="#">[APP-097]</a> confirmed that the MMMP would include the following measures: <ul style="list-style-type: none"> <li>the implementation of an initiation stage of a piling soft start and ramp-up</li> <li>minimum and maximum separation limit of 1.4km and 15km, respectively, for concurrent piling</li> <li>maximum hammer energy of 4,400kJ for a single piling event and 3,000kJ for concurrent piling</li> <li>the implementation of a mitigation hierarchy with regard to unexploded ordnance (UXO) clearance</li> <li>appropriate mitigation for piling, UXO clearance and some types of geophysical activities that could potentially lead to injurious effects</li> </ul> </li> <li>An UWSMS, to be based on the Outline UWSMS <a href="#">[REP6-045]</a>, which would also be produced prior to piling activities or unexploded ordnance clearance</li> </ul> | Agreed with Natural England <a href="#">[RR-026]</a>              |
| River Eden SAC                           | <ul style="list-style-type: none"> <li>Atlantic salmon</li> <li>Sea lamprey</li> <li>River lamprey</li> </ul> |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                   |
| River Ehen SAC                           | <ul style="list-style-type: none"> <li>Atlantic salmon</li> <li>Freshwater pearl mussel</li> </ul>            |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                   |
| River Kent SAC                           | <ul style="list-style-type: none"> <li>Freshwater pearl mussel</li> </ul>                                     |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                   |
| Afon Gwyrfai a Llyn Cwellyn SAC          | <ul style="list-style-type: none"> <li>Atlantic salmon</li> </ul>                                             |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Agreed with NRW <a href="#">[RR-027]</a>                          |

| European site(s)                                       | Qualifying Feature(s)                                                                                     | AEoI alone OR in-combination                                                 | Mitigation required to avoid AEoI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Evidence of agreement of no AEoI Evidence of agreement of no AEoI                           |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Dee Estuary/ Aber Dyfrdwy SAC                          | <ul style="list-style-type: none"><li>Sea lamprey</li><li>River lamprey</li></ul>                         |                                                                              | <ul style="list-style-type: none"><li>In respect of impacts from EMF, an Offshore CMS including a CSIP. The CSIP would commit to cable burial where possible. An Outline Offshore CMS (incorporating an Outline CSIP) was provided in <a href="#">[REP4-032]</a></li><li>Development of and adherence to a Decommissioning Programme (to be secured through Schedule 2 of the draft DCO <a href="#">[REP7-007]</a> as a requirement of the Energy Act 2004)</li></ul>                                                                                                          |                                                                                             |
| River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC | <ul style="list-style-type: none"><li>Atlantic salmon</li><li>Sea lamprey</li><li>River lamprey</li></ul> |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                             |
| River Bladnoch SAC                                     | <ul style="list-style-type: none"><li>Atlantic salmon</li></ul>                                           |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                             |
| Solway Firth SAC                                       | <ul style="list-style-type: none"><li>Sea lamprey</li><li>River lamprey</li></ul>                         |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No – NatureScot did not participate in the Examination                                      |
| Annex II marine mammals                                |                                                                                                           |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                             |
| Murlough SAC                                           | <ul style="list-style-type: none"><li>Harbour seal</li></ul>                                              | No - see section 1.6 of the HRA Stage 2 SAC Report <a href="#">[APP-097]</a> | <ul style="list-style-type: none"><li>MMMP and UWSMS as detailed above for Annex II diadromous fish</li><li>Inclusion of measures to minimise disturbance to marine mammals and rafting birds from transiting vessels in an Offshore Environmental Management Plan (EMP), which accords with the outline version <a href="#">[REP4-018]</a></li><li>Site induction processes to incorporate the principles of the Wildlife Safe (WiSe) Scheme, to be included in the Offshore EMP</li><li>Development of and adherence to a Decommissioning Programme (to be secured</li></ul> | No - DAERA did not participate in the Examination                                           |
| Maidens SAC                                            | <ul style="list-style-type: none"><li>Grey seal</li></ul>                                                 |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                             |
| Strangford Lough SAC                                   | <ul style="list-style-type: none"><li>Harbour seal</li></ul>                                              |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                             |
| North Channel SAC                                      | <ul style="list-style-type: none"><li>Harbour porpoise</li></ul>                                          |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Agreed with JNNC <a href="#">[REP3-035]</a> . DAERA did not participate in the Examination. |

| European site(s) | Qualifying Feature(s) | AEol alone OR in-combination | Mitigation required to avoid AEol                                                                       | Evidence of agreement of no AEol Evidence of agreement of no AEol |
|------------------|-----------------------|------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
|                  |                       |                              | through Schedule 2 of the draft DCO <a href="#">[REP7-007]</a> as a requirement of the Energy Act 2004) |                                                                   |



## **Sites and features discussed during the Examination**

### **Sites with Annex II marine mammal qualifying features**

- C.4.80 The Applicant identified LSEs for 12 sites within the UK NSN designated for Annex II marine mammals. The Applicant's assessment of effects on integrity was presented at the application stage in section 1.6 of the HRA Stage 2 SAC Report [\[APP-097\]](#).
- C.4.81 Natural England and NRW did not initially confirm [\[RR-026\]](#) [\[RR-027\]](#) that they were able to rule out AEol to the English and Welsh sites and features, which are:
- Lundy SAC (grey seal feature)
  - Isles of Scilly Complex SAC (grey seal feature)
  - Bristol Channel Approaches/ Dynesfeydd Môr Hafren SAC (harbour porpoise feature)
  - Cardigan Bay/ Bae Ceredigion SAC (bottlenose dolphin and grey seal features)
  - North Anglesey Marine/ Gogledd Môn Forol SAC (harbour porpoise feature)
  - Pembrokeshire Marine/ Sir Benfro Forol SAC (grey seal feature)
  - Pen Llŷn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC (bottlenose dolphin and grey seal features)
  - West Wales Marine/ Gorllewin Cymru Forol SAC (harbour porpoise feature)
- C.4.82 NRW stated [\[RR-027\]](#) that for impulsive noise sources both the Marine Mammals ES Chapter (then [\[APP-022\]](#), now [\[REP6-031\]](#)) and HRA Stage 2 SAC Report [\[APP 097\]](#) reference that changes in the impulsive characteristics of impulsive sound at range implies that disturbance thresholds for piling noise should be precautionary at long range (in other words, a few kilometres). NRW did not agree with this conclusion and recommended that this error was rectified [\[RR-027\]](#). The Applicant responded [\[PD1-017\]](#) that its approach aligned with the latest scientific guidance. NRW subsequently agreed that this issue did not materially affect the conclusions, since assessment results were based on the full modelled range of disturbance [\[REP1-056\]](#).

### **Sites with bottlenose dolphin qualifying features**

- C.4.83 LSEs were identified from underwater noise during construction and decommissioning from piling, UXO clearance, pre-construction site investigation surveys and from vessels and other vessel activities. In combination LSE were identified during construction, O&M and decommissioning.
- C.4.84 As reported in Table 3.2 of the RIES [\[PD-011\]](#), NRW advised [\[RR-027\]](#) that the bottlenose dolphin populations of Cardigan Bay and Pen Llŷn a'r Sarnau SACs are highly connected and that the two protected sites should be considered together. By D1, NRW had agreed (having reviewed the Applicant's response to its concerns in [\[PD1-017\]](#)) that this did not materially impact the conclusions of the application and considered that this matter could be closed [\[REP1-056\]](#).
- C.4.85 NRW went on to agree [\[REP4-044\]](#) that AEol alone and in-combination can be excluded for all the marine mammal qualifying features of the SACs within its remit and that position remained unchanged at Examination close.
- C.4.86 NRW stated that its agreement in this regard was on the proviso that the UWSMS, MMMP and other post-consent mitigation was secured [\[REP4-044\]](#).

### **Sites with harbour porpoise and grey seal qualifying features**

- C.4.87 LSEs were identified from underwater noise during construction and decommissioning from piling, UXO clearance, pre-construction site investigation surveys; and during

construction, O&M and decommissioning from vessels and other vessel activities. In combination LSE were identified during construction, O&M and decommissioning.

- C.4.88 For harbour porpoise of North Anglesey Marine/ Gogledd Môn Forol SAC, LSEs were also identified from changes in prey availability during construction.
- C.4.89 As indicated above, NRW agreed at D4 [\[REP4-044\]](#) that AEol alone and in-combination can be excluded for all the marine mammal qualifying features of the SACs within its remit, provided the mitigation measures outlined by the Applicant are secured. At D5, Natural England confirmed [\[REP5-080\]](#) that AEol alone and in-combination can be excluded for the marine mammal qualifying features of the SACs within its remit (grey seal of the Lundy SAC and Isles of Scilly Complex SAC).
- C.4.90 JNCC also concluded [\[REP3-035\]](#), that AEol could be ruled out for all sites within its remit (harbour porpoise of the Bristol Channel Approaches/ Dynesfeydd Môr Hafren SAC, North Anglesey Marine/ Gogledd Môn Forol SAC and West Wales Marine/ Gorllewin Cymru Forol SAC) on the basis that the measures in the Outline MMMP and Outline UWSMS are sufficient to mitigate the potential impacts.
- C.4.91 The ExA notes the Applicant's commitment to low order UXO clearance and the amendments made to the Outline MMMP and Outline UWSMS during the Examination. The Outline MMMP, Outline UWSMS and Outline Offshore EMP would all be certified documents under Schedule 5 of the draft DCO [\[REP7-007\]](#). Providing that the proposed mitigation measures are adhered to, the ExA concludes that AEol from the proposed development can be excluded, both alone and in combination with other plans or projects, on all marine mammal SAC features.

#### **Sites with offshore ornithological qualifying features**

- C.4.92 The Applicant identified LSEs for 33 sites within the UK NSN designated for offshore ornithological features. The Applicant's assessment of effects on integrity was presented in the HRA Stage 2 Report [\[APP-098\]](#), revised in [\[REP6-066\]](#) and the addendum [\[REP5-036\]](#).
- C.4.93 The assessment concluded that the proposed development would not adversely affect the integrity of any of the European sites and features assessed, either alone or in-combination with other projects or plans. This conclusion relied upon the mitigation measures detailed in Table 1.6 of [\[APP-098\]](#), revised in [\[REP6-066\]](#), as summarised above.
- C.4.94 In addition to the overarching methodology concerns detailed above and resolved with Natural England, NRW and JNCC by the close of Examination, a number of matters relating to specific sites, features or impacts were discussed during the Examination. These are detailed below.

#### **Rathlin Island SPA - breeding seabird assemblage**

- C.4.95 There were inconsistencies in the information presented in the HRA Stage 2 SPA Report [\[APP-098\]](#), revised in [\[REP6-066\]](#) regarding whether the breeding seabird assemblage qualifying feature of Rathlin Island SPA had been carried forward to the Step 2 integrity test. ExQ1 HRA 1.7 [\[PD-004\]](#) asked the Applicant to confirm the outcome of the Step 1 integrity test for all features of the Rathlin Island SPA and if necessary, provide the feature account information for the breeding seabird assemblage feature omitted from Section 1.6.2 of [\[APP-098\]](#), revised in [\[REP6-066\]](#).
- C.4.96 In response, the Applicant confirmed [\[REP3-006\]](#) that the breeding assemblage of the Rathlin Island SPA did not require consideration in the Step 2 integrity test as the impact from the proposed development alone on all features that constitute the

assemblage represented less than a 0.05% increase in the baseline mortality of the SPA population. The Applicant included this matter in its Errata Sheet [\[REP3-011\]](#).

C.4.97 The ExA considers this matter to be resolved.

**Sites with Manx shearwater as qualifying features – baseline characterisation**

C.4.98 The Applicant calculated regional populations using a method that the ANCBs did not agree with. Specifically, the RSPB [\[RR-035\]](#) considered the Applicant's Digital Aerial Survey effort was unlikely to properly characterise the activity of Manx shearwater at the application site. The RSPB stated that it did not have confidence in the baseline densities of Manx shearwater presented, and therefore it was impossible to make any conclusions as to the significance of effects.

C.4.99 Natural England [\[RR-026\]](#), [\[REP6-100\]](#) advised the regional population figures for Manx shearwater and gannet to be used for the project alone assessment and for all species in the cumulative assessment but did not consider that this would alter the conclusions of the assessment. The Applicant [\[REP1-039\]](#) considered its surveys to be sufficient and that the appropriate data (including aerial surveys) had been used to inform assessment.

C.4.100 At Examination close, the RSPB [\[REP6-086\]](#) maintained concerns in relation to the baseline survey methods and assessment of Manx shearwater; however, it acknowledged that this concern relates to wider industry limitations rather than a project specific issue. The Applicant [\[REP7-004\]](#) confirmed that baseline characterisation has been undertaken in line with Natural England's guidance in its response to RRs [\[PD1-017\]](#), that this is not resolvable at a project level, and highlighted that Natural England, NRW and JNCC conclude [\[REP5-079\]](#), [\[AS-012\]](#) and [\[REP5-067\]](#) agreement of no AEoI from the proposed development alone and in-combination with other plans and projects for all European sites.

C.4.101 Having had regard to the submissions made, the ExA is satisfied with the baseline characterisation for Manx shearwater.

**Sites with herring gull as qualifying features – in-combination assessment of collision risk with Awel y Môr**

C.4.102 As detailed above, Natural England [\[RR-026\]](#) expressed concern around the methodology for assessing in-combination effects from collision risk on the basis that it deviated from ANCB advice and that historic impacts had not been taken into account. NRW [\[REP1-056\]](#) raised similar concerns, as well as a concern that for herring gull, the 'extended' Band model Option 3 figures had been included for Awel y Môr in the cumulative and in-combination assessments. It recommended use of Option 2 figures.

C.4.103 The Applicant [\[PD1-017\]](#) confirmed that assessments had used Option 2 for all species for Awel y Môr with the exception of herring gull, for which outputs from Option 3 were used. However, the Applicant stated that use of Option 2 for herring gull would make no difference to the conclusions reached in the ES Offshore Ornithology Chapter [\[APP-023\]](#), revised in [\[REP6-033\]](#) and HRA Stage 2 SPA Report [\[APP-098\]](#), revised in [\[REP6-066\]](#).

C.4.104 At D3, the Applicant provided a clarification note [\[REP3-018\]](#) considering the potential impact on the assessment conclusions if collision risk estimates calculated using Option 2 of the Band collision risk model were used instead for herring gull. The Applicant concluded [\[REP3-018\]](#) that there would be no change to the conclusions of no AEoI reached in the HRA Stage 2 SPA Report [\[APP-098\]](#), revised in [\[REP6-066\]](#).

- C.4.105 NRW [\[REP4-044\]](#) welcomed the comparison of figures between the Applicant's approach versus the ANCB advised approach for the Band model options provided in [\[REP3-018\]](#). However, NRW continued to advise that herring gull figures are updated to present Option 2 figures clearly and concisely as the ANCB preferred approach. NRW did accept that the conclusions are unlikely to be materially changed irrespective of approach taken [\[REP4-044\]](#).
- C.4.106 At D4, Natural England considered [\[REP4-042\]](#) that the comparison of figures between the Applicant's approach versus the ANCB advised approach for the Band model options provided in [\[REP3-018\]](#) serves as 'stress-testing' of the Applicant's conclusions and maintained that the required update should be applied.
- C.4.107 At D5, the Applicant submitted its updated in-combination collision data [\[REP5-032\]](#), [\[REP5-033\]](#) (later superseded by [\[AS-013\]](#)), [\[REP5-034\]](#) and [\[REP5-035\]](#) using the parameters advocated by the ANCBs which included impact values for historical projects that were not previously included.
- C.4.108 At D5 Natural England considered [\[REP5-079\]](#) that these updated assessments now aligned with the advised approach provided by Natural England and NRW. Natural England agreed that an AEoI could be ruled out for collision effects, alone and in-combination, for all English sites [\[REP5-079\]](#), [\[REP6-100\]](#).
- C.4.109 Further to its D5 position [\[REP5-083a\]](#) NRW has since confirmed in [\[AS-012\]](#), [\[REP6-101\]](#) that it can conclude no AEoI alone or in-combination for all Welsh SPAs.
- C.4.110 Having had regard to all submissions made, the ExA is content with the Applicant's collision risk modelling and therefore agrees with its assessment conclusions in respect of herring gull.

**Sites with great black-backed gull as qualifying features– Population Viability Analysis (PVA) survival rates and collision risk and displacement in-combination effects**

- C.4.111 Natural England [\[REP1-053\]](#) identified that the Applicant had applied herring gull survival rates to the black-backed gull for PVA. It recommended using the herring gull 0-1 year survival rate and the adult great black-backed gull rate from Horswill and Robinson, as it is considered precautionary for weighted mean survival rates at 1% thresholds. Natural England also requested clarification on the parameters used to derive the mortality estimates recommending that they align with ANCB advice.
- C.4.112 The Applicant provided updated PVA modelling for great black-backed gull using parameters recommended by Natural England at D5 [\[REP5-031\]](#).
- C.4.113 Following review of the Applicant's D5 submissions, Natural England [\[REP6-100\]](#) agreed that the appropriate methodology had been used in the PVA assessment for the EIA population, but not the Isles of Scilly SPA population. Whilst it did not consider this specific issue fully resolved, Natural England agreed with the Applicant that there is not connectivity between the Isles of Scilly SPA population and the proposed development and therefore, agreed that an AEoI can be ruled out [\[REP6-100\]](#).
- C.4.114 At Examination close, the RSPB [\[REP6-086\]](#) continued to disagree that an AEoI can be ruled out for the great black-backed gull as a feature of the Isles of Scilly SPA from collision and displacement mortality in-combination effects. Due to resource constraints, the RSPB was unable to review and conclude on the information provided by the Applicant at D5 [\[REP5-032\]](#) and [\[REP5-035\]](#).

- C.4.115 Having had regard to the submissions made, the ExA is satisfied with the assessment of survival rates and collision risk and displacement in-combination effects to great black-backed gull.
- Liverpool Bay SPA – construction and operation vessel movement disturbance and displacement to red throated diver, common scoter and wintering waterbird assemblage qualifying features**
- C.4.116 Natural England [\[RR-026\]](#), [\[REP1-053\]](#) and NRW [\[RR-027\]](#), [\[REP2-026\]](#) considered that Liverpool Bay SPA should also have been identified for inclusion in the Stage 1 and Stage 2 assessments, in view of potential disturbance and displacement impacts from vessel movements in the construction or O&M phases on the red-throated diver and common scoter qualifying features. However, they considered that adherence to specific measures secured through the Offshore EMP may mitigate these impacts.
- C.4.117 The Applicant's Addendum [\[REP5-036\]](#) to the HRA Stage 2 SPA Report [\[APP-098\]](#), revised in [\[REP6-066\]](#) submitted at D5 presented Stage 1 and 2 assessments for the Liverpool Bay SPA. No AEol was concluded for the red-throated diver, common scoter and waterbird assemblage qualifying features on the basis that mitigation measures would reduce potential effects and there would be a negligible increase in vessel traffic [\[REP5-036\]](#).
- C.4.118 The Applicant also submitted an outline Offshore EMP at D4 [\[REP4-018\]](#). Annex E of the Outline Offshore EMP cross-refers to the document 'Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels' [\[APP-070\]](#), revised in [\[REP5-046\]](#) and the Outline Vessel Traffic Management Plan [\[REP2-017\]](#), now [\[REP6-055\]](#) for the relevant measures to minimise disturbance to rafting birds from transiting vessels
- C.4.119 Natural England [\[REP5-080\]](#) and NRW [\[REP5-083\]](#) initially considered the measures were inadequate and specified the measures they considered should be adopted by the Applicant [\[REP5-079\]](#), [\[REP5-080\]](#), [\[REP5-081\]](#), [\[REP5-083\]](#), which included:
- Selecting routes that avoid known aggregations of birds
  - Maintaining direct transit routes (to minimise transit distances through areas used by divers) / restricting (to the extent possible) vessel movements to existing navigation routes (where the densities of divers are typically relatively low)
  - Avoidance of over - revving of engines (to minimise noise disturbance)
  - Where possible avoid works during the over winter period 1st Nov – 31st March inclusive
  - Maintaining direct transit routes (to minimise transit distances through areas used by divers)
  - Briefing of vessel crew on the purpose and implications of these vessel management practices (through, for example, tool-box talks)
- C.4.120 At D6, Natural England reviewed the Applicant's document 'Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels' [\[REP5-046\]](#) and confirmed [\[REP6-100\]](#) that appropriate mitigation had been secured and that it considered this matter resolved at D6. Natural England confirmed that an AEol could be ruled out for the relevant qualifying features of the Liverpool Bay SPA alone and in-combination [\[REP6-105\]](#).
- C.4.121 NRW [\[REP6-101\]](#) agreed that following the Applicant's D5 updates [\[REP5-047\]](#), an AEol could be ruled out for red-throated diver, common scoter and the wintering waterbird assemblage features of the Liverpool Bay SPA on the basis that the mitigation measures are considered appropriate.



- C.4.122 As above, JNCC is also in agreement with the conclusion of no AEol on the red-throated diver and common scoter qualifying features of the Liverpool Bay SPA [\[REP3-035\]](#).
- C.4.123 Submission of an Offshore EMP, which accords with the outline version, is secured through the draft DMLs (Condition 20) [\[REP7-007\]](#). The outline Offshore EMP [\[REP4-018\]](#) is included within the list of documents to be certified under Schedule 5 of the draft DCO [\[REP7-007\]](#).
- C.4.124 Inclusion of the measures to minimise disturbance to marine mammals and rafting birds from transiting vessels [\[REP5-046\]](#) in the Offshore EMP is secured through the draft DMLs (Condition 20) [\[REP7-007\]](#). [\[REP5-046\]](#) is also included within the list of documents to be certified under Schedule 5 of the draft DCO [\[REP7-007\]](#).
- C.4.125 Having regard to advice from the ANCBs, the ExA is satisfied that the mitigation measures proposed by the Applicant and secured through the recommended DCO would ensure the conservation objective target to 'minimise' disturbance caused by human activity to the red-throated diver and common scoter features of Liverpool Bay SPA would be achieved. The ExA is therefore content that the proposed development would not result in further deterioration of, or undermine the conservation objectives of, the Liverpool Bay SPA and that an AEol, alone and in-combination, can be excluded. The ExA notes its conclusion that appropriate mitigation has been secured and that an AEol can be excluded is shared by Natural England [\[REP6-105\]](#), NRW [\[REP6-101\]](#) and JNCC [\[REP3-035\]](#).

#### **Grassholm SPA – gannet qualifying feature**

- C.4.126 The HRA Stage 2 SPA Report [\[APP-098\]](#), revised in [\[REP6-066\]](#) assessed impacts to the gannet feature of the Grassholm SPA, concluding no AEol from the project alone, on the basis that the impact represented less than a 1% increase in baseline mortality of the SPA population. It also concluded no AEol from the project in-combination as the predicted impact from the project alone represents less than a 0.05% increase in baseline mortality of the SPA population.
- C.4.127 The Applicant submitted 'Ornithological assessment clarification data Welsh sites' [\[REP5-033\]](#), superseded by [AS-013](#) in order to address NRW's methodological concerns. The Applicant subsequently submitted a clarification note [\[REP6-060\]](#) to provide further detail in relation to the information provided for gannet at the Grassholm SPA in [\[AS-013\]](#), as discussed with NRW, to set out both the ANCB and Applicant's positions.
- C.4.128 In view of the above, NRW [\[AS-012\]](#), [\[REP6-101\]](#) confirmed agreement with the conclusion of no AEol alone and in-combination to all Welsh SPAs, including gannet of Grassholm SPA.
- C.4.129 Having had regard to the submissions made, the ExA is satisfied that the Applicant has appropriately assessed impacts to the gannet feature of the Grassholm SPA.

#### **Conclusions**

- C.4.130 The offshore ornithological concerns were resolved during Examination through a high number of submissions. By the close of Examination, the Applicant had submitted updated assessments to take account of the guidance recommended by Natural England, NRW and JNCC. It also provided an explanatory note [\[REP6-057\]](#) and additional information [\[REP6-058\]](#), [\[REP6-059\]](#) to support the information submitted at D5 [\[REP5-032\]](#), [\[AS-013\]](#), [\[REP5-034\]](#), [\[REP5-035\]](#). The Applicant's submitted documents at D5 reflect the positions of both the ANCBs and the Applicant covering English, Welsh, and offshore sites. The explanatory note [\[REP6-057\]](#) includes



additional details such as apportioning values for cumulative impacts, the process for identifying species requiring PVA and the associated PVA input logs. It also outlines the sources of information used and additional details needed to support the assessments.

- C.4.131 The final versions of the HRA Stage 1 Screening Report [\[REP6-067\]](#) and HRA Stage 2 SPA Report [\[REP6-066\]](#) used the Applicant's preferred approach. Irrespective of whether the Applicant's preferred approach or the ANCB-advised parameters are used, the Applicant concluded that AEol from the proposed development and in-combination with other plans and projects could be ruled out beyond reasonable scientific doubt.
- C.4.132 By the close of Examination, Natural England [\[REP6-091\]](#), JNCC [\[REP6-106\]](#) and NRW [\[REP6-101\]](#) had all confirmed agreement of no AEol of any European site for which they are responsible, as a result of the proposed development alone or in-combination with other plans or projects.
- C.4.133 There is outstanding disagreement with RSPB on the baseline survey methods and assessment of Manx shearwater, the assessment of HPAI and in-combination displacement effects to great black-backed gull as a feature of the Isles of Scilly SPA.
- C.4.134 The ExA has considered the potential for the proposed development to result in adverse effects on all of the European sites, offshore ornithology qualifying features and the impact pathways for which it considers there to be a LSE (as per Table 1.110 of the HRA Screening Report [\[APP-099\]](#), revised in [\[REP6-067\]](#) and Appendix A of [\[REP5-036\]](#)).
- C.4.135 The ExA is satisfied, based on the information provided, that the correct impacts, sites and features have been assessed. The ExA is also satisfied, taking into account the additional information submitted during the Examination, that the scope of the Applicant's in-combination assessment is correct and no additional plans or projects need to be considered.
- C.4.136 Having had regard to the outstanding concerns of RSPB in respect of HPAI, the ExA agrees with the Applicant's position [\[REP3-006\]](#) that it has considered the impact of HPAI in its application documents as far as possible.
- C.4.137 As reported above, the ExA is content that the mitigation measures proposed by the Applicant and secured through the draft DCO mean that the proposed development would not result in further deterioration of, or undermine the conservation objectives of, the Liverpool Bay SPA and that an AEol, alone and in-combination, can be excluded.
- C.4.138 In terms of all other sites designated for offshore ornithology, the ExA is satisfied that the mitigation measures required to avoid AEol are adequately detailed through relevant plans detailed in the preceding sections of this Appendix and secured through the draft DCO.
- C.4.139 The ExA notes that a number of the European sites with offshore ornithological features for which it considers there to be a LSE are located within Scottish and Northern Irish waters. As noted previously, NatureScot and DAERA did not engage with the Examination, therefore the ExA does not have their views on impacts on the European sites for which they are responsible.
- C.4.140 However, on the basis of the information submitted and considering the pathways assessed, the ExA is content that the proposed development would not result in further deterioration of, or undermine the conservation objectives of, any European site with offshore ornithological qualifying feature(s) and that an AEol from the project alone or in combination can be excluded.

## **C.5 HRA CONCLUSIONS**

- C.5.1 The proposed development is not directly connected with, or necessary to, the management of a European site, and therefore the implications of the project with respect to adverse effects on potentially affected sites must be assessed by the SoS.
- C.5.2 71 European sites within the UK NSN were considered in the Applicant's assessment of LSE. The Applicant's screening conclusions in respect of Annex II diadromous fish and Annex II marine mammals were not disputed during the Examination. The methodology and outcomes of the Applicant's assessments for offshore ornithology were subject to scrutiny during the Examination. The ExA is content that the issues raised have been satisfactorily resolved to enable it to make a recommendation to the SoS (for both the screening stage and effects on integrity stage).
- C.5.3 The ExA has concluded that LSE from the proposed development alone or in-combination with other plans or projects would arise for nine UK European sites designated for Annex II diadromous fish, 12 UK European sites designated for Annex II marine mammals and 33 UK European sites designated for offshore ornithology. These are identified in Section C.2 above.
- C.5.4 For the European sites and qualifying features for which a LSE was identified, the Applicant's conclusion of no AEol for European sites with Annex II diadromous fish qualifying features was not disputed by any IPs and was agreed with Natural England and NRW prior to the Examination commencing.
- C.5.5 For marine mammals, the Applicant's commitment to low order UXO clearance and amendments to the Outline UWSMS and Outline MMMP during the Examination resolved key concerns. Natural England, NRW and JNCC have all agreed that AEol alone and in-combination can be excluded for the marine mammal qualifying features of the SACs within their remits.
- C.5.6 For offshore ornithology, the Applicant provided an assessment of impacts to Liverpool Bay SPA and committed to mitigation measures which led to agreement with Natural England, NRW and JNCC that AEol could be excluded for the features of this SPA.
- C.5.7 The concerns raised by Natural England, NRW and JNCC relating to the methodology and outcomes of the offshore ornithological assessment were resolved during the Examination and they have now all confirmed agreement of no AEol of any European site for which they are responsible, as a result of the proposed development alone or in-combination with other plans or projects.
- C.5.8 NatureScot and DAERA did not engage with the Examination, therefore the ExA does not have their views on impacts on the European sites for which they are responsible. There are outstanding concerns that have not been resolved with the RSPB as previously discussed however, the RSPB did not review the most recent submissions from the Applicant and provide comment.
- C.5.9 In summary, the ExA's findings are that, subject to the mitigation measures that would be secured in the recommended DCO, AEol from the proposed development alone or in combination with other plans or projects can be excluded from the impact-effect pathways for all European sites within the UK NSN.
- C.5.10 The ExA considers that there is sufficient information before the SoS to enable it to understand the potential for adverse effects on European sites from the proposed development alone or in combination. However, given the amount of HRA information submitted by both the Applicant and ANCBs following publication of the RIES, the SoS may wish to undertake further consultation to fulfil the duties under Regulation 63(3) of the Habitats Regulations and Regulation 28(4) of the Offshore Habitats Regulations.

## **C.6 HRA SUB-APPENDIX: OFFSHORE ORNITHOLOGY – CHRONOLOGICAL OVERVIEW OF KEY HRA DOCUMENTS**

### **Introduction**

- C.6.1 This sub-appendix provides a chronological overview of the key documents submitted during pre-Examination and Examination by the Applicant and highlights the key responses to these documents by Natural England, JNCC and NRW.

### **Pre-Examination**

- C.6.2 Natural England and NRW comment upon the Applicant's HRA Report in their relevant representations [\[RR-026\]](#); [\[RR-027\]](#).
- C.6.3 The Applicant responded [\[PD1-017\]](#) to Natural England and NRW's concerns around the methodology for assessment and submitted a regional population comparison [\[PD1-016\]](#) between the Applicant's methodology applied in the HRA assessments and the Expert Working Group calculations undertaken in pre-application.
- C.6.4 The Applicant also provided an Errata Sheet [\[PD1-003\]](#) to address errors in the Stage 1 and Stage 2 assessments.

### **Deadline 1**

- C.6.5 The Applicant submitted the following updated documents:
- Offshore Ornithology Baseline Characterisation [\[REP1-026\]](#)
  - Offshore Ornithology Cumulative Effects Assessment (CEA) and In-combination Gap-filling of Historical Projects Note [\[REP1-010\]](#) which quantifies impacts from historical offshore wind projects that were previously assessed qualitatively
  - Displacement Rates Clarification Note [\[REP1-011\]](#) to address comments from Natural England and NRW on displacement and mortality rates used in the HRA Stage 2 assessments for SPA and Ramsar sites. It clarifies that incorporating additional rates does not change the conclusions of no AEol
  - Apportioning Sensitivity Analysis [\[REP1-012\]](#) which responds to Natural England's comment on the data used for apportioning analyses in HRA Stage 2 assessments for SPA and Ramsar sites

### **Deadline 2**

- C.6.6 The Applicant submitted an updated Errata Sheet [\[REP2-009\]](#) which contained corrections and the following updates within the errata annex:
- Updates to the Offshore Ornithology Apportioning Technical Report [\[APP-057\]](#) for calculation of non-breeding season apportioning values for lesser black-backed gulls
  - Updates to the HRA Stage 1 Screening Report [\[APP-099\]](#) for annual mean predicted mortality estimates across species and seasons from collision risk and displacement
- C.6.7 The Applicant also submitted the following documents to address the identified concerns:
- Treatment of Birds in Flight Data in Abundance Estimation [\[REP2-021\]](#) to provide a comparison between the proportions of birds in flight calculated using data from the Morgan Generation Assets survey area (as presented in the application) and the Morgan Array Area as requested by Natural England [\[RR-026\]](#)

- Great Black-Backed Gull Regional Populations [\[REP2-022\]](#) to consider implications of updated regional population data on the relevant assessments
- Sensitivity Review of CEA and In-Combination Assessment [\[REP2-023\]](#) to account for new and updated project information

### **Deadline 3**

C.6.8 Natural England [\[REP3-046\]](#) and NRW [\[REP3-050\]](#), [\[REP3-051\]](#) considered that the SNCB advice on methodology for assessment had still not been followed and that whilst the comparison of approaches was welcome, it did not address their concerns. JNCC [\[REP3-035\]](#) had outstanding concerns regarding Skomer, Skokholm, and the Seas off Pembrokeshire/ Sgomer, Sgogwm a Moroedd Penfro SPA due to shared concerns with Natural England and NRW about the methodology.

C.6.9 The Applicant submitted further documents to address the identified concerns:

- Review of CEA and In-Combination Assessment: Offshore Ornithology [\[REP3-019\]](#), to account for new and updated project information
- Inclusion of Awel y Môr in Cumulative Assessments – Clarification Note [\[REP3-018\]](#)
- Kittiwake Apportioning Clarification Note [\[REP3-020\]](#) to address comments from Natural England [\[RR-026\]](#) and NRW [\[RR-027\]](#), [\[REP1-056\]](#) on the methodology for calculating adult proportions in apportioning analyses for kittiwake in HRA Stage 1 and Stage 2 assessments

### **Deadline 4**

C.6.10 Natural England [\[REP4-042\]](#) deferred comments on offshore ornithology on the basis it would review new ornithology data at D5. NRW considered the Applicant's updated documents 'stress-tested' its approach, however it could not rule out AEol for Welsh sites until the methodological concerns were fully addressed [\[REP4-044\]](#).

C.6.11 The Applicant submitted further documents to address the concerns:

- Review of Cumulative Effects Assessment and In-Combination Assessment: Morgan and Morecambe Offshore Wind Farms: Transmission Assets [\[REP4-024\]](#)
- Conservation Objectives Clarification Note [\[REP4-030\]](#) in response to the ExA's first round of written questions, specifically question HRA 1.10 which requested the Applicant to provide conservation objectives for all European sites for which a Likely Significant Effect had been identified and to confirm whether any qualifying features assessed in the Stage 2 SPA/ Ramsar Report [\[APP-098\]](#) were in unfavourable condition and/ or have a restore Conservation Objective target
- Differences between the Morgan Generation Assets and the Mona Offshore Wind Project in abundance estimates used in the CEA [\[REP4-031\]](#) to explain the differences in displacement impacts for kittiwake

### **Deadline 5**

C.6.12 The Applicant submitted further documents to address concerns:

- Consideration of impacts on ornithological features of Ramsar sites on the Isle of Man [\[REP5-005\]](#) – following ExQ1 [MO1.17, [PD-004](#)] this was provided in response to ISH 2 Action point 20 [\[EV5-014\]](#) which requested an update to the HRA screening report to record consideration of Isle of Man existing and proposed Ramsar sites to put all the information in one place. The conclusion of no LSE was not altered.
- Additional PVA Modelling for Great Black-Backed Gull Cumulative Assessment [\[REP5-031\]](#) – following agreement with Natural England that this would be provided

to inform information to support the assessment based on Natural England's preferred methodology on a cumulative basis. The conclusion of no AEol was not altered.

- Ornithological assessment clarification data [\[REP5-035\]](#) – to address methodological concerns of ANCBs and incorporate all the updated assessment information requested by the SNCBs submitted by the Applicant during the Examination to correspond with the approach recommended by the ANCBs:
  - Annex 16.1 to Ornithological Assessment Clarification Data English sites [\[REP5-032\]](#)
  - Annex 16.2 to Ornithological Assessment Clarification Data Welsh Sites [\[REP5-033\]](#)
  - Annex 16.3 to Ornithological Assessment Clarification Data Offshore Sites [\[REP5-034\]](#)
- Liverpool Bay/ Bae Lerpwl SPA Clarification Note [\[REP5-036\]](#) – an addendum to the HRA Stage 2 SPA Report [\[APP-098\]](#) which provides the assessments required in response to the ExA's question HRA 2.3 [\[PD-009\]](#). In addition so as to provide a full HRA assessment for the Liverpool Bay SPA, a LSE matrix is provided in Appendix A.

- C.6.13 In response to ExQ2 (HRA 2.1 [\[REP5-015\]](#)) the Applicant explained that it had submitted the information requested by Natural England in [\[REP5-032\]](#), [\[REP5-033\]](#), [\[REP5-034\]](#), [\[REP5-035\]](#) and considered that it had closed all remaining methodological issues. The Applicant anticipated that Natural England could confirm resolution of the outstanding methodological issues at D5 (HRA 2.1 [\[REP5-015\]](#)).
- C.6.14 Natural England confirmed in [\[REP5-079\]](#) (having reviewed draft spreadsheets from the Applicant with the summary data ahead of D5) that the information to be submitted by the Applicant at D5 addressed its concerns around methodological issues.
- C.6.15 NRW considered (MO 2.3 [\[REP5-083\]](#)) that project-alone methodological concerns had been resolved, but at D5 it not yet been able to review the in-combination assessment. NRW subsequently confirmed in an Additional Submission [\[AS-012\]](#) that it had now reviewed [\[REP5-033\]](#) and could conclude no AEol alone or in combination for Welsh SPAs, with the exception of the gannet feature of Grassholm SPA (with NRW having identified errors in the data for that site). Based on updated figures the Applicant then shared with them, NRW confirmed in [\[AS-012\]](#) it is also able to agree to no AEol, alone or in-combination, on gannet of Grassholm SPA. The Applicant subsequently submitted the updated figures to the Examination in [\[AS-013\]](#) (rev 2), superseding [\[REP5-033\]](#) (rev 1).
- C.6.16 JNCC confirmed that it had no outstanding not-agreed methodological issues with the application [\[REP5-067\]](#).
- C.6.17 Natural England, NRW and JNCC's agreements at D5 were on the proviso that the figures that the Applicant presented to the Examination at D5, were in accordance with the figures shared with them in advance of D5. NRW's agreement in [\[AS-012\]](#) was on the proviso that the updated figures submitted to the Examination by the Applicant [\[AS-013\]](#) are in accordance with the figures received by NRW on 27 January 2025.
- C.6.18 RSPB [\[REP5-091\]](#) maintained that HPAI has still not been appropriately considered in the HRA assessments. In response to ExQ2 (MO 2.3 [\[PD-009\]](#)), the RSPB confirmed [\[REP5-091\]](#) that it would review all relevant submissions and submit a list of agreed and not agreed methodological issues at D6.
- C.6.19 Before D6, NRW [\[AS-012\]](#) provided an additional submission confirming that it had reviewed the Applicant's D5 submissions and that as a result, it could conclude no

AEol for the project alone and in-combination to all relevant Welsh SPAs, including Grassholm SPA.

## **Deadline 6**

- C.6.20 Natural England submitted its Principal Areas of Disagreement Summary Statement [\[AS-015\]](#) and Risk and Issues Log [\[AS-016\]](#) as an additional submission between D6 and D7 confirming agreement on all offshore ornithology matters.
- C.6.21 The Applicant submitted the following documents:
- Revised HRA Stage 2 Report [version 2, [REP6-066](#)], with the only change to this document being that an Errata Sheet was added to address minor discrepancies in Table 1.26 and Figure 1.1
  - Revised HRA Stage 1 Screening Report [version 2, [REP6-067](#)], with the only change to this document being that an Errata Sheet was added, including predicted mortality estimates from collision risk and displacement using Natural England's recommended parameters and the upper range associated with displacement and mortality rates for each species
  - Comments on the RIES [\[REP6-013\]](#), which included confirmation that the figures shared with the ANCBs outside of the Examination were identical to those submitted to the Examination
  - Updated Offshore Ornithology CRM Technical Report [\[REP6-038\]](#) – to address minor discrepancies
  - Updated Offshore Ornithology Apportioning Technical Report [\[REP6-039\]](#) - to address transcription error of incorrect values listed in Appendix A for lesser black-backed gull
  - Review of Cumulative Effects Assessment and In-Combination Assessment at D6 [\[REP6-042\]](#) – to provide an up to date position at the close of Examination considering new projects not previously considered. This did not alter the conclusions
  - Appendix to Ornithological Assessment Clarification Data [\[REP5-035\]](#) - Explanatory note to support SNCB and Applicant workbooks [\[REP6-057\]](#) – to support D5 submissions including the apportioning values applied to cumulative impacts for other projects, the process undertaken to identify those species for which PVA was required and the associated PVA input logs. It includes the sources of information used to populate the workbooks
    - Annex 16.4 to Ornithological Assessment Clarification Data [\[REP5-035\]](#) - Applicant's Parameters (English sites) [\[REP6-058\]](#)
    - Annex 16.5 to Ornithological Assessment Clarification Data [\[REP5-035\]](#) - Applicant's Parameters (Welsh sites) [\[REP6-059\]](#)
  - Assessment of Gannet at the Grassholm SPA [\[REP6-060\]](#)
  - Population Viability Analysis for the Regional Population of Guillemot [\[REP6-061\]](#) – further detail to address the request from NRW that an explanatory note would inform the assessments undertaken by all stakeholders
  - Appendix to Offshore Ornithology CEA and In-Combination Gap-filling of Historical Projects Note [\[REP1-010\]](#) - CRM Log files [\[REP6-070\]](#)

## **Deadline 7**

- C.6.22 Applicant's Response to Rule 17 Letter [\[REP7-004\]](#) includes the Applicant's final response to outstanding RSPB concerns.



## **APPENDIX D: THE RECOMMENDED DCO**

**2025 No.**

**INFRASTRUCTURE PLANNING**

**The Morgan Offshore Wind Project: Generation Assets Order  
202[]**

*Made* - - - - - \*\*\*

*Laid before Parliament* \*\*\*

*Coming into force* \*\*\*

**CONTENTS**

**PART 1**

**Preliminary**

|    |                           |   |
|----|---------------------------|---|
| 1. | Citation and commencement | 2 |
| 2. | Interpretation            | 2 |

**PART 2**

**Principal Powers**

|    |                                               |   |
|----|-----------------------------------------------|---|
| 3. | Development consent etc. granted by the Order | 6 |
| 4. | Operation of generating station               | 6 |
| 5. | Deemed marine licences under the 2009 Act     | 6 |
| 6. | Power to maintain the authorised project      | 6 |
| 7. | Benefit of the Order                          | 6 |

**PART 3**

**Miscellaneous and general**

|     |                                         |   |
|-----|-----------------------------------------|---|
| 8.  | Abatement of works abandoned or decayed | 8 |
| 9.  | Saving provisions for Trinity House     | 8 |
| 10. | Crown rights                            | 8 |
| 11. | Certification of plans, etc.            | 9 |
| 12. | Service of notices                      | 9 |

---

|                                     |    |
|-------------------------------------|----|
| SCHEDULE 1 — Authorised Development | 10 |
| PART 1 — Authorised Development     | 10 |
| PART 2 — Ancillary Works            | 12 |

|                                                                                                                               |    |
|-------------------------------------------------------------------------------------------------------------------------------|----|
| SCHEDULE 2 — Requirements                                                                                                     | 12 |
| SCHEDULE 3 — Deemed Marine Licence under the 2009 Act – Licence 1: Wind<br>Turbine Generators and Associated Infrastructure   | 19 |
| PART 1 — Licensed marine activities                                                                                           | 19 |
| PART 2 — Conditions                                                                                                           | 28 |
| SCHEDULE 4 — Deemed Marine Licence under the 2009 Act – Licence 2:<br>Offshore Substation Platforms and Interconnector Cables | 41 |
| PART 1 — Licensed marine activities                                                                                           | 41 |
| PART 2 — Conditions                                                                                                           | 49 |
| SCHEDULE 5 — Documents to be certified                                                                                        | 62 |

An application has been made to the Secretary of State under section 37 of the Planning Act 2008(a) (“the 2008 Act”) for an Order granting development consent.

The application was examined by a panel of [x] members (appointed by the Secretary of State) in accordance with Part 6 of the 2008 Act and carried out in accordance with the Infrastructure Planning (Examination Procedure) Rules 2010(b).

The panel, having considered the representations made and not withdrawn and the application together with the accompanying documents, in accordance with section 74(2) of the 2008 Act, has submitted a report and recommendation to the Secretary of State.

The Secretary of State has considered the [representations made and not withdrawn], and the report and recommendation of the panel, has taken into account the environmental information in accordance with regulation 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017(c), and, as a national policy statement as effect in relation to the proposed development, has had regard to the documents and matters referred to in section 104(2) of the 2008 Act.

The Secretary of State, in exercise of the powers conferred by sections [114, 115, 120 and 132, and schedule 5] to the 2008 Act, makes the following Order:

## PART 1

### Preliminary

#### Citation and commencement

1. This Order may be cited as the Morgan Offshore Wind Project Generation Assets Order 202[•] and comes into force on [•] 202[•].

#### Interpretation

2.—(1) Except for Schedule 3 (deemed marine licence under the 2009 Act – Licence 1: Wind Turbine Generators and Associated Infrastructure) and Schedule 4 (deemed marine licence under the 2009 Act – Licence 2: Offshore Substation Platforms and Interconnector Cables), which are subject to the definitions in those Schedules, in this Order—

---

(a) 2008 c.29. Section 37 was amended by section 128(2) and Schedule 13, Part 1, paragraphs 1 to 5 of the Localism Act 2011 (c.20).  
(b) S.I. 2010/103. This instrument was amended by S.I. 2012/635.  
(c) S.I. 2017/572.

“1989 Act” means the Electricity Act 1989(a);

“2004 Act” means the Energy Act 2004(b);

“2008 Act” means the Planning Act 2008;

“2009 Act” means the Marine and Coastal Access Act 2009(c);

“address” includes any number or address used for the purposes of electronic transmission;

“ancillary works” means the ancillary works described in Part 2 of Schedule 1 (ancillary works) and any other works authorised by this Order that are not development within the meaning of section 32 of the 2008 Act;

“authorised development” means the development and associated development described in Part 1 of Schedule 1 (authorised development) and any other development authorised by this Order that is development within the meaning of section 32 of the 2008 Act;

“authorised project” means the authorised development and ancillary works;

“bank holiday” means a bank holiday in England and Wales under section 1 of the Banking and Financial Dealings Act 1971(d);

“buoy” means any floating device used for navigational purposes or measurement purposes, including but not limited to wave buoys, LiDAR and guard buoys;

“cable” means up to 400kV cables for the transmission of electricity and includes fibre optic and other communications cables either within the cable or laid alongside;

“cable crossings” means the crossing of sub-sea cables, pipelines or other existing infrastructure by the cables (including inter-array cables) authorised by this Order together with cable protection;

“cable protection” means measures to protect cables from physical damage including but not limited to concrete mattresses, with or without frond devices, and/or rock placement, the use of bagged solutions filled with grout or other materials;

“commence” means the first carrying out of any licensed activities authorised by licence 1 or licence 2, save for pre-construction surveys, monitoring surveys, unexploded ordnance surveys and clearance of low order unexploded ordnance approved under licence 1 or licence 2, and “commenced” and “commencement” must be construed accordingly;

“electronic transmission” means a communication transmitted—

- (a) by means of an electronic communications network; or
- (b) by other means but while in electronic form;

“environmental statement” means the document certified as the environmental statement by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“deemed marine licences” means the marine licences set out in Schedules 3 (Deemed Marine Licence under the 2009 Act – Licence 1: Wind Turbine Generators and Associated Infrastructure) and 4 (Deemed Marine Licence under the 2009 Act – Licence 2: Offshore Substation Platforms and Interconnector Cables);

“foundation” means any one or more of: a multi-leg pin-piled jacket, multi-leg suction bucket jacket, or gravity base foundation;

“gravity base foundation” means a structure principally of steel, concrete, or steel and concrete with a base which rests on the seabed either due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“inter-array cables” means the cables linking the wind turbine generators to each other and to the offshore substation platforms;

---

(a) 1989 c.29.  
 (b) 2004 c.20.  
 (c) 2009 c.23.  
 (d) 1971 c.80.

“interconnector cables” means the cables linking the offshore substation platforms to each other;

“jacket foundation” means a steel jacket/lattice-type structure constructed principally of steel, fixed to the seabed with pin-piles or steel suction buckets and associated equipment including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“km” means kilometres;

“LAT” means lowest astronomical tide;

“licensed activities” means the activities specified in Part 1 of the deemed marine licences;

“licence 1” means the marine licence set out in Schedule 3 (Deemed marine licence under the 2009 Act – Licence 1: Wind Turbine Generators and other Offshore Infrastructure);

“licence 2” means the marine licence set out in Schedule 4 (Deemed marine licence under the 2009 Act – Licence 2: Offshore Substation Platforms and Interconnector Cables);

“LiDAR” means a light detection and ranging system used to measure weather and sea conditions;

“m” means metres and “m<sup>2</sup>” means metres squared;

“maintain” includes inspect, upkeep, repair, adjust or alter the authorised development, and remove, reconstruct or replace any part of the authorised development, to the extent assessed in the environmental statement; and any derivative of “maintain” is to be construed accordingly;

“Marine Management Organisation” means the body created under the 2009 Act which is responsible for the regulation of licence 1 and licence 2 or any successor of that function and “MMO” must be construed accordingly;

“measures to minimise disturbance to marine mammals and rafting birds from transiting vessels” means the document certified as the measures to minimise disturbance to marine mammals and rafting birds from transiting vessels by the Secretary of State under article 11 (certification of plans etc.) for the purposes of this Order;

“offshore in principle monitoring plan” means the document certified as the offshore in principle monitoring plan by the Secretary of State under article 11 (certification of plans, etc.) of the Order;

“offshore substation platform” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and open with modular equipment or fully clad, containing—

- (c) electrical equipment required to switch, transform or convert electricity generated at the wind turbine generators to a higher voltage and provide reactive power compensation, including high voltage power transformers, high voltage switchgear and busbars, substation auxiliary systems and low voltage distribution, instrumentation, metering equipment and control systems, standby generators, shunt reactors, auxiliary and uninterruptible power supply systems;
- (d) accommodation, storage, workshop auxiliary equipment and facilities for operating, maintaining and controlling the substation or wind turbine generators, including navigation, aviation and safety marketing and lighting, systems for vessel charging, access and retrieval, cranes, potable water supply, black water separation, stores, fuels and spares, communications systems and control hub facilities and other associated equipment and facilities;

“offshore surface structures” means offshore substation platforms and wind turbine generators;

“Order limits” means the limits shown on the order limits and grid coordinates plan within which the authorised development may be carried out;

“order limits and grid coordinates plan” means the document certified as the order limits and grid coordinates plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline environmental management plan” plan means the document certified as the outline environmental management plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline fisheries liaison and co-existence plan” plan means the document certified as the outline fisheries liaison and co-existence plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline marine mammal mitigation protocol” means the document certified as the outline marine mammal mitigation protocol” by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore written scheme of investigation for archaeology” means the document certified as the outline offshore written scheme of investigation for archaeology by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“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 11 (certification of plans, etc.) of this Order;

“outline underwater sound management strategy” means the document certified as the outline underwater sound management strategy” by the Secretary of State under article 11 (certification of plans, etc.) of the Order;

“outline vessel traffic management plan” means the document certified as the outline vessel traffic management plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“operation” means the undertaking of activities authorised by this Order which are not part of the construction, commissioning or decommissioning of the authorised development;

“pin-piles” means steel or concrete cylindrical piles driven and/or drilled into the seabed to secure jacket foundations;

“requirements” means those matters set out in Part 1 of Schedule 2 (requirements) to this Order;

“scour protection” means measures to prevent loss of seabed sediment around any structure placed in or on the seabed including by the use of bagged solutions, filled with grout or other materials, protective aprons, mattresses with or without frond devices, and rock and gravel placement;

“scheduled works” means the numbered works specified in Part 1 of Schedule 1 (authorised development) to this Order, or any part of them;

“suction bucket foundation” means a tubular steel structure which partially or fully penetrates the seabed and associated equipment, including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“undertaker” means Morgan Offshore Wind Limited (company registration number: 13497271) whose registered office address is Chertsey Road, Sunbury on Thames, Middlesex, United Kingdom, TW16 7BP;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“wind turbine generator” means a structure comprising a tower, rotor with three blades connected at the hub, nacelle and ancillary electrical and other equipment which may include J-tube(s), transition piece, access and rest platforms, access ladders, boat access systems, corrosion protection systems, fenders and maintenance equipment, helicopter landing facilities and other associated equipment including communications equipment, fixed to a foundation or transition piece;



“the works plan” means the plan certified as the works plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order.

(2) All distances, directions, areas and lengths referred to in this Order are approximate and distances between points on a work comprised in the authorised development are taken to be measured along that work.

(3) References in this Order to points identified by letters or numbers are to be construed as references to points so lettered or numbered on the relevant plans.

(4) References in this Order to numbered works are references to the works as numbered in Part 1 of Schedule 1 (authorised development).

## PART 2

### Principal Powers

#### **Development consent etc. granted by the Order**

3.—(1) Subject to the provisions of this Order and to the requirements in schedule 2 the undertaker is granted—

- (a) development consent for the authorised development; and
- (b) consent for the ancillary works;

to be carried out within the Order limits.

#### **Operation of generating station**

4.—(1) The undertaker is authorised to use and operate the authorised development for which development consent is granted by this Order.

(2) Paragraph (1) does not relieve the undertaker of any requirement to obtain any permit or licence under any legislation that may be required from time to time to authorise the operation of the authorised development.

#### **Deemed marine licences under the 2009 Act**

5. The marine licences set out in Schedules 3 and 4 are deemed to have been granted to the undertaker under Part 4 (marine licensing) of the 2009 Act for the licensed activities specified in Part 1 of each licence and subject to the conditions specified in Part 2 of each licence.

#### **Power to maintain the authorised project**

6.—(1) Subject to paragraph (2), the undertaker may at any time maintain the authorised project, except to the extent that this Order or an agreement made under this Order provides otherwise.

(2) The power to maintain conferred under paragraph (1) does not relieve the undertaker of any requirement to obtain any further licence under Part 4 (marine licensing) of the 2009 Act for the licensable activities not authorised by licence 1 or licence 2.

#### **Benefit of the Order**

7.—(1) Subject to this article, the provisions of this Order have effect solely for the benefit of the undertaker.

(2) Subject to sub-paragraph (5), the undertaker may with the written consent of the Secretary of State—

- (a) transfer to another person (“the transferee”) any or all of the benefit of the provisions of this Order (excluding deemed marine licence 1 or licence 2 referred to in sub-paragraph

(3) below) and such related statutory rights as may be agreed between the undertaker and the transferee; and

- (b) grant to another person (“the lessee”) for a period agreed between the undertaker and the lessee any or all of the benefit of the provisions of this Order (excluding deemed marine licence 1 or licence 2) and such related statutory rights as may be so agreed,

except where sub-paragraph (6) applies, in which case the consent of the Secretary of State is not required.

(3) Subject to sub-paragraph (5), the undertaker may with the written consent of the Secretary of State—

- (a) where an agreement has been made in accordance with sub-paragraph (2)(a), transfer to the transferee the whole of deemed marine licence 1 or licence 2 (as appropriate) granted under Schedules 3 and 4 of this Order and such related statutory rights as may be agreed between the undertaker and the transferee; or
- (b) where an agreement has been made in accordance with sub-paragraph (2)(b), grant to the lessee for the duration mentioned in sub-paragraph (2)(b), the whole of deemed marine licence 1 or licence 2 (as appropriate) granted under Schedules 3 and 4 of this Order and such related statutory rights as may be so agreed,

except where sub-paragraph (6) applies, in which case the consent of the Secretary of State is not required.

(4) The Secretary of State must consult the MMO before giving consent to the transfer or grant to another person of the benefit of the provisions of deemed marine licence 1 or licence 2.

(5) Where the undertaker has transferred any benefit, or for the duration of any period during which the undertaker has granted any benefit, under sub-paragraphs (2) or (3)—

- (a) the benefit transferred or granted (“the transferred benefit”) shall include any rights that are conferred, and any obligations that are imposed, by virtue of the provisions to which the benefit relates;
- (b) the transferred benefit shall reside exclusively with the transferee or, as the case may be the lessee, and the transferred benefit shall not be enforceable against the undertaker save in the case of a deemed marine licence transferred or granted in respect of any breach of an obligation by the undertaker which occurs prior to such transfer or grant or which occurs as a result of any activity carried out by the undertaker on behalf of the transferee; and
- (c) the exercise by a person of any benefits or rights conferred in accordance with any transfer or grant under sub-paragraphs (2) or (3) is subject to the same restrictions, liabilities and obligations as would apply under this Order if those benefits or rights were exercised by the undertaker.

(6) No consent of the Secretary of State is required where the transferee or lessee is the holder of a licence under section 6 (licences authorising supply, etc.) of the 1989 Act(a).

(7) Where an agreement has been made in accordance with sub-paragraphs (2) or (3) references in this Order to the undertaker, will include references to the transferee or lessee.

(8) Prior to any transfer or grant under this article taking effect the undertaker must give notice in writing to the Secretary of State and the MMO.

(9) A notice required under sub-paragraph (8) must—

- (a) state—
  - (i) the name and contact details of the person to whom the benefit of the provisions will be transferred or granted;

---

(a) Section 6 was amended by sections 89, 136, 198, 143 and 145, Part 1 of Schedule 23 and paragraphs 3 and 5 of Schedule 19 to the Energy Act 2004 (c.20), sections 72 and 121 and Schedule 1 to the Energy Act 2011 (c.16), sections 166, 186, 334 and 205 to the Energy Act 2023 (c.52), S.I. 2011/2704. There are other amendments to section 6 which are not relevant to the Order.

- (ii) the date on which the transfer will take effect (which must be at least 28 days after the date on which the notice is given);
  - (iii) the provisions to be transferred or granted; and
  - (iv) the restrictions, liabilities, and obligations that, in accordance with sub-paragraph (5)(c), will apply to the person exercising the powers transferred or granted.
- (b) be accompanied by—
- (i) where relevant, a plan showing the works or areas to which the transfer or grant relates; and
  - (ii) a copy of the document effecting the transfer or grant signed by the undertaker and the person to whom the benefit of the powers will be transferred or granted.

(10) The notice specified under sub-paragraph (8) must be signed by the undertaker and the person to whom the benefit of the powers will be transferred or granted as specified in that notice.

(11) Section 72(7) and (8) of the 2009 Act do not apply to a transfer or grant of the benefit of the provisions of deemed marine licence 1 or licence 2 to another person by the undertaker pursuant to an agreement under this article save that the MMO may amend any deemed marine licence granted under Schedule 3 or Schedule 4 of the Order to correct the name of the undertaker to the name of a transferee or lessee under this article 7 (benefit of the Order).

## PART 3

### Miscellaneous and general

#### **Abatement of works abandoned or decayed**

8. Where the scheduled works or any part of them are abandoned or allowed to fall into decay, the Secretary of State may, following consultation with the undertaker, issue a written notice requiring the undertaker at its own expense either to repair, make safe and restore one or any of the scheduled works or any relevant part of them, or to remove them or any relevant part of them, and without prejudice to any notice served under section 105(2) (requirement to prepare decommissioning programmes) of the 2004 Act<sup>(a)</sup>, restore the site to a safe and proper condition, to such an extent and within such limits as may be specified in the notice.

#### **Saving provisions for Trinity House**

9. Nothing in this Order prejudices or derogates from any of the rights, duties or privileges of Trinity House.

#### **Crown rights**

10.—(1) Nothing in this Order affects prejudicially any estate, right, power, privilege, authority or exemption of the Crown and in particular, nothing in this Order authorises the undertaker or any licensee to use, enter upon or in any manner interfere with any rights of any description belonging to His Majesty in right of the Crown and forming part of The Crown Estate without the consent in writing of the Crown Estate Commissioners.

(2) A consent under paragraph (1) may be given unconditionally or subject to terms and conditions; and is deemed to have been given in writing where it is sent electronically.

---

<sup>(a)</sup> Section 105 was amended by section 69 of the Energy Act 2008 (c.32).

### **Certification of plans, etc.**

11.—(1) The undertaker must, as soon as practicable after the making of this Order, submit to the Secretary of State copies of all documents listed in Schedule 5 for certification that they are true copies of the documents referred to in this Order.

(2) A plan or document so certified is admissible in any proceedings as evidence of the contents of the document of which it is a copy.

### **Service of notices**

12.—(1) A notice or other document required or authorised to be served for the purposes of this Order may be served—

- (a) by post;
- (b) by delivering it to the person on whom it is to be served or to whom it is to be given or supplied; or
- (c) with the consent of the recipient and subject to paragraphs (5) to (8) by electronic transmission.

(2) Where the person on whom a notice or other document to be served for the purposes of this Order is a body corporate, the notice or document is duly served if it is served on the secretary or clerk of that body.

(3) For the purposes of section 7 (references to service by post) of the Interpretation Act 1978<sup>(a)</sup> as it applies for the purposes of this article, the proper address of any person in relation to the service on that person of a notice or document under paragraph (1) is, if that person has given an address for service, that address, and otherwise—

- (a) in the case of the secretary or clerk of a body corporate, the registered or principal office of that body; and
- (b) in any other case, the last known address of that person at the time of service.

(4) Where a notice or other document required to be served or sent for the purposes of this Order is served or sent by electronic transmission the requirement is to be taken to be fulfilled only where—

- (a) the recipient of the notice or other document to be transmitted has given consent to the use of electronic transmission in writing or by electronic transmission;
- (b) the notice or document is capable of being accessed by the recipient;
- (c) the notice or document is legible in all material respects; and
- (d) the notice or document is in a form sufficiently permanent to be used for subsequent reference.

(5) Where the recipient of a notice or other document served or sent by electronic transmission notifies the sender within seven days of receipt that the recipient requires a paper copy of all or part of that notice or other document the sender must provide such a copy as soon as reasonably practicable.

(6) Any consent to the use of electronic communication given by a person may be revoked by that person in accordance with paragraph (7).

(7) Where a person is no longer willing to accept the use of electronic transmission for any of the purposes of this Order—

- (a) that person must give notice in writing or by electronic transmission revoking any consent given by that person for that purpose; and
- (b) such revocation is final and takes effect on a date specified by the person in the notice but that date must not be less than seven days after the date on which the notice is given.

---

(a) 1978 c.30.

(8) This article does not exclude the employment of any method of service not expressly provided for by it.

(9) In this article “legible in all material respects” means that the information contained in the notice or document is available to that person to no lesser extent than it would be if served, given or supplied by means of a notice or document in printed form.

Signed by the authority of the Secretary of State for Energy Security and Net Zero

Address  
Date

Name  
Title  
Department

## SCHEDULE 1

Articles 3 and 4

### Authorised Development

#### PART 1

##### Authorised Development

1. A nationally significant infrastructure project as defined in sections 14 (nationally significant infrastructure projects: general) and 15 (generating stations) of the 2008 Act located in the Irish Sea approximately 36 kilometres from the coast of north-west England comprising an offshore wind generating station with an electrical output capacity of over 100MW.

*Work No. 1—*

- (a) up to 96 wind turbine generators; and
- (b) a network of subsea inter-array cables between the wind turbine generators including cable crossings and cable protection;

*Work No. 2—* up to four offshore substation platforms; and

*Work No. 3—* a network of subsea interconnector cables between the offshore substation platforms including cable crossings and cable protection.

In connection with the scheduled works and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised development and which fall within the scope of the work assessed by the environmental statement, including—

- (c) scour protection around the foundations of the offshore structures;
- (d) cable protection measures, such as the placement of rock and/or concrete mattresses, with or without frond devices;
- (e) dredging;
- (f) the removal of material from the seabed and the disposal of inert material of natural origin within the Order limits produced during construction drilling, seabed preparation for foundation works, cable installation preparation such as sandwave clearance, boulder clearance and pre-trenching;
- (g) creation and use of temporary vessel laydown areas and use of cable anchors;
- (h) removal of static fishing equipment;
- (i) the use of extracted seabed material within gravity base foundations; and
- (j) lighting.

2. The grid coordinates for the scheduled works are as shown on the order limits and grid coordinates plan and as specified below:

| <i>Point ID</i> | <i>Latitude</i>   | <i>Longitude</i> |
|-----------------|-------------------|------------------|
| 1               | 53° 54' 27.788" N | 3° 58' 8.915" W  |
| 2               | 53° 54' 41.257" N | 3° 58' 42.184" W |
| 3               | 53° 57' 6.032" N  | 4° 3' 55.525" W  |
| 4               | 53° 57' 7.936" N  | 4° 4' 25.017" W  |
| 5               | 53° 57' 13.636" N | 4° 5' 53.497" W  |
| 6               | 53° 58' 7.549" N  | 4° 7' 48.094" W  |
| 7               | 54° 0' 28.539" N  | 4° 12' 48.480" W |
| 8               | 54° 0' 33.128" N  | 4° 12' 41.699" W |
| 9               | 54° 0' 39.541" N  | 4° 12' 32.331" W |
| 10              | 54° 0' 49.220" N  | 4° 12' 18.682" W |
| 11              | 54° 0' 58.979" N  | 4° 12' 5.399" W  |
| 12              | 54° 1' 0.852" N   | 4° 12' 2.795" W  |
| 13              | 54° 1' 10.663" N  | 4° 11' 49.441" W |
| 14              | 54° 1' 20.488" N  | 4° 11' 36.537" W |
| 15              | 54° 1' 26.187" N  | 4° 11' 24.779" W |
| 16              | 54° 1' 31.886" N  | 4° 11' 13.315" W |
| 17              | 54° 1' 33.367" N  | 4° 11' 10.387" W |
| 18              | 54° 1' 34.438" N  | 4° 11' 8.270" W  |
| 19              | 54° 1' 39.125" N  | 4° 10' 59.214" W |
| 20              | 54° 1' 41.978" N  | 4° 10' 53.701" W |
| 21              | 54° 1' 42.739" N  | 4° 10' 52.231" W |
| 22              | 54° 1' 47.148" N  | 4° 10' 43.936" W |
| 23              | 54° 1' 48.940" N  | 4° 10' 40.404" W |
| 24              | 54° 1' 57.247" N  | 4° 10' 24.352" W |
| 25              | 54° 2' 5.706" N   | 4° 10' 8.569" W  |
| 26              | 54° 2' 11.564" N  | 4° 9' 57.954" W  |
| 27              | 54° 2' 14.425" N  | 4° 9' 52.857" W  |
| 28              | 54° 2' 14.433" N  | 4° 9' 52.843" W  |
| 29              | 54° 2' 14.446" N  | 4° 9' 52.820" W  |
| 30              | 54° 2' 23.202" N  | 4° 9' 37.580" W  |
| 31              | 54° 2' 23.221" N  | 4° 9' 37.547" W  |
| 32              | 54° 2' 23.229" N  | 4° 9' 37.534" W  |
| 33              | 54° 2' 23.238" N  | 4° 9' 37.518" W  |
| 34              | 54° 2' 23.239" N  | 4° 9' 37.517" W  |
| 35              | 54° 2' 32.133" N  | 4° 9' 22.564" W  |
| 36              | 54° 2' 32.146" N  | 4° 9' 22.542" W  |
| 37              | 54° 2' 32.159" N  | 4° 9' 22.521" W  |
| 38              | 54° 2' 32.166" N  | 4° 9' 22.509" W  |
| 39              | 54° 2' 32.172" N  | 4° 9' 22.500" W  |
| 40              | 54° 2' 41.223" N  | 4° 9' 7.804" W   |
| 41              | 54° 2' 41.236" N  | 4° 9' 7.782" W   |
| 42              | 54° 2' 41.249" N  | 4° 9' 7.761" W   |
| 43              | 54° 2' 41.257" N  | 4° 9' 7.749" W   |
| 44              | 54° 2' 41.263" N  | 4° 9' 7.739" W   |
| 45              | 54° 2' 50.489" N  | 4° 8' 53.271" W  |
| 46              | 54° 2' 59.863" N  | 4° 8' 39.076" W  |



|    |                   |                  |
|----|-------------------|------------------|
| 47 | 54° 3' 9.407" N   | 4° 8' 25.119" W  |
| 48 | 54° 3' 19.079" N  | 4° 8' 11.466" W  |
| 49 | 54° 3' 28.890" N  | 4° 7' 58.099" W  |
| 50 | 54° 3' 38.836" N  | 4° 7' 45.024" W  |
| 51 | 54° 3' 48.923" N  | 4° 7' 32.234" W  |
| 52 | 54° 3' 52.208" N  | 4° 7' 28.172" W  |
| 53 | 54° 3' 56.043" N  | 4° 7' 23.528" W  |
| 54 | 54° 3' 59.107" N  | 4° 7' 19.782" W  |
| 55 | 54° 3' 59.122" N  | 4° 7' 19.764" W  |
| 56 | 54° 3' 59.130" N  | 4° 7' 19.754" W  |
| 57 | 54° 4' 1.160" N   | 4° 7' 17.353" W  |
| 58 | 54° 4' 1.181" N   | 4° 7' 17.328" W  |
| 59 | 54° 4' 6.734" N   | 4° 7' 10.779" W  |
| 60 | 54° 4' 7.781" N   | 4° 7' 9.560" W   |
| 61 | 54° 4' 9.456" N   | 4° 7' 7.587" W   |
| 62 | 54° 4' 13.935" N  | 4° 7' 2.501" W   |
| 63 | 54° 4' 16.028" N  | 4° 7' 0.112" W   |
| 64 | 54° 4' 18.943" N  | 4° 6' 56.806" W  |
| 65 | 54° 4' 19.913" N  | 4° 6' 55.716" W  |
| 66 | 54° 4' 24.700" N  | 4° 6' 50.475" W  |
| 67 | 54° 4' 30.489" N  | 4° 6' 44.156" W  |
| 68 | 54° 4' 35.097" N  | 4° 6' 39.269" W  |
| 69 | 54° 4' 40.000" N  | 4° 6' 34.145" W  |
| 70 | 54° 4' 41.189" N  | 4° 6' 32.904" W  |
| 71 | 54° 4' 45.972" N  | 4° 6' 28.021" W  |
| 72 | 54° 3' 42.182" N  | 4° 0' 24.131" W  |
| 73 | 54° 0' 25.772" N  | 3° 53' 55.337" W |
| 74 | 53° 58' 34.172" N | 3° 47' 19.232" W |
| 75 | 53° 56' 34.760" N | 3° 47' 14.121" W |

## PART 2

### Ancillary Works

3. Works within the Order limits which fall within the scope of the work assessed by the environmental statement comprising –

- (a) temporary landing places, moorings or other means of accommodating vessels in the construction and/or maintenance of the authorised development; and
- (b) buoys, beacons, fenders and other navigational warning or ship impact protection works.

## SCHEDULE 2

Article 3

### Requirements

#### Time limits

1. The authorised development must commence no later than the expiration of five years beginning with the date this Order comes into force.

## Design parameters

2.—(1) The wind turbine generators to be constructed as part of the authorised development must be located within the area shown on the works plan.

(2) No part of any wind turbine generators to be constructed as part of the authorised development shall extend beyond the Order limits.

(3) The authorised development must be constructed in accordance with the parameters assessed in the environmental statement and set out in Table 1.

(4) References to the location of an offshore surface structure in Table 1 is a reference to the centre point of that structure.

(5) In the event that driven or part-driven pile foundations are proposed to be used, the hammer energy used to drive or part-drive the pile foundations must not exceed—

- (a) 4,400kJ in respect of pin pile foundations at up to 16 locations; and
- (b) 3,000kJ in respect of any other foundations.

**Table 1**

| <i>Parameter</i>                                                                                                 | <i>Value</i> |
|------------------------------------------------------------------------------------------------------------------|--------------|
| Maximum number of wind turbine generators                                                                        | 96           |
| Maximum height of wind turbine generators when measured from LAT to the tip of the vertical blade (m)            | 364          |
| Maximum rotor diameter of each wind turbine generator (m)                                                        | 320          |
| Maximum rotor swept area (m <sup>2</sup> )                                                                       | 5,468,884    |
| Minimum distance from LAT to the lowest point of the rotating blade for each turbine (m)                         | 34           |
| Minimum distance from HAT to the lowest point of the rotating blade for each turbine (m)                         | 26           |
| Minimum distance between all offshore surface structures (in all directions) (m)                                 | 1,400        |
| Maximum diameter of pin-piles for wind turbine generators on jacket pin-pile foundations (m)                     | 5.5          |
| Maximum diameter of gravity base at the seabed for wind turbine generators on gravity base foundations (m)       | 49           |
| Maximum diameter of buckets for wind turbine generators on suction bucket jackets (m)                            | 18           |
| Maximum diameter of pin-piles for offshore substation platforms on jacket pin-pile foundations (m)               | 5.5          |
| Maximum diameter of gravity base at the seabed for offshore substation platforms on gravity base foundations (m) | 80           |
| Maximum diameter of buckets for offshore substation platforms on suction bucket jackets (m)                      | 18           |
| Maximum number of wind turbines on jacket driven pin-pile foundations                                            | 64           |
| Maximum total volume of extracted seabed material to be used in gravity base foundations (m <sup>3</sup> )       | 490,000      |
| Maximum total seabed footprint of wind turbine generators (including scour protection) (m <sup>2</sup> )         | 735,488      |
| Maximum volume of scour protection for wind turbine generators (m <sup>3</sup> )                                 | 1,701,998    |
| Maximum volume of scour protection for offshore substation foundations (m <sup>3</sup> )                         | 58,361       |
| Maximum number of offshore substation platforms                                                                  | 4            |
| Maximum dimensions of offshore substations (excluding towers, helipads, masts, and cranes):                      |              |

|                                                                                                                        |         |
|------------------------------------------------------------------------------------------------------------------------|---------|
| Height when measured from LAT (m)                                                                                      | 70      |
| Length (m)                                                                                                             | 80      |
| Width (m)                                                                                                              | 60      |
| Maximum total seabed footprint area for offshore substation foundations (including scour protection) (m <sup>2</sup> ) | 24,964  |
| Maximum total length of cables (km)                                                                                    | 450     |
| Maximum number of cable crossings                                                                                      | 20      |
| Maximum volume of cable protection (inter-array and interconnector) (m <sup>3</sup> )                                  | 852,600 |
| Maximum total seabed footprint area for cable protection (inter-array and interconnector) (m <sup>2</sup> )            | 548,800 |

### **Aviation safety**

3.—(1) The undertaker must exhibit such lights, with such shape, colour and character and at such times as are required by Air Navigation Order 2016 and/or determined necessary for aviation safety in consultation with the Defence Infrastructure Organisation Safeguarding and as directed by the Civil Aviation Authority. Lighting installed specifically to meet Ministry of Defence aviation safety requirements must remain operational for the life of the authorised development unless otherwise agreed with the Ministry of Defence.

(2) The undertaker must notify the Defence Infrastructure Organisation Safeguarding, at least 14 days prior to the commencement of the scheduled works, of the following—

- (a) the date of the commencement of construction of the scheduled works;
- (b) the date any wind turbine generators are brought into use;
- (c) the maximum height of any construction equipment to be used;
- (d) the maximum heights of any wind turbine generator, and offshore substation platform to be constructed;
- (e) the latitude and longitude of each wind turbine generator, and offshore substation platform to be constructed; and

the Defence Infrastructure Organisation Safeguarding must be notified of any changes to the information supplied under this paragraph and of the completion of the construction of the scheduled works.

(3) The lights installed in accordance with paragraph (1) will be operated at the lowest permissible lighting intensity level.

### **St Anne's and Lowther Hill Primary Surveillance Radar**

4.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until a primary radar mitigation scheme agreed in advance with the operator has been submitted to and approved in writing by the Secretary of State in order to avoid the impact of the development on the primary radar of the operator located at St Anne's and Lowther Hill Primary Surveillance Radar and associated air traffic management operations.

(2) No part of any wind turbine generator shall be erected until the approved primary radar mitigation scheme has been implemented and the authorised development then shall thereafter be operated fully in accordance with such approved scheme.

(3) For the purposes of this requirement:—

- (a) “operator” means NATS (En Route) plc, incorporated under the Companies Act (4129273) whose registered office is 4000 Parkway, Whiteley, Fareham, Hants PO15 7FL or such other organisation licensed from time to time under sections 5 and 6 of the Transport Act 2000 to provide air traffic services to the relevant managed area (within the meaning of section 40 of that Act); and
- (b) “primary radar mitigation scheme” or “scheme” means a detailed scheme agreed with the operator which sets out the measures to be taken to avoid at all times the impact of the

development on the St Anne's and Lowther Hill Primary Surveillance Radar and air traffic management operations of the operator.

#### **Air traffic services at Warton Aerodrome**

5.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until

- (a) an ATS mitigation scheme has been submitted to and approved in writing by the Secretary of State, in consultation with the CAA and the operator; and
- (b) the Secretary of State, following consultation with the CAA and the operator, has confirmed in writing that he/she is satisfied that the Approved ATS mitigation scheme has been implemented by the undertaker in accordance with sub-paragraph (4)(a) of this requirement.

(2) For the purposes of this requirement—

“Approved ATS mitigation scheme” means the ATS mitigation scheme as approved by the Secretary of State in accordance with sub-paragraph (1)(a).

“ATS mitigation scheme” means a scheme which is designed to prevent or remove any adverse impacts arising from the authorised development on the operation of Warton Aerodrome, including but not limited to:

- (i) the Aerodrome's ability to provide and deliver, on an uninterrupted basis
  - (aa) national sovereign defence capabilities;
  - (bb) safe airport operational and air traffic services that are fit for purpose for both civil and military aircraft operations; and
  - (cc) any other operational requirements which are identified by the operator; and
- (ii) the Aerodrome's IFP, MSA, DF, VHF and UHF communication systems;

“CAA” means the Civil Aviation Authority constituted by the Civil Aviation Act 1982;

“DF” means direction finding;

“IFP” means instrument flight procedures;

“MSA” means minimum sector altitude;

“operator” means BAE Systems (Operations) Limited (incorporated in England and Wales with company number 01996687, whose registered office is at Victory Point, Lyon Way, Frimley, Camberley, Surrey GU16 7EX) or such other organisation as is licensed from time to time under sections 5 and 6 of the Transport Act 2000 to provide air traffic services at Warton Aerodrome or any organisation employed by BAE Systems (Operations) Limited to provide an air traffic service at Warton Aerodrome;

“UHF” means ultra high frequency; and

“VHF” means very high frequency.

(3) The approved ATS mitigation scheme must remain in place and be complied with for the lifetime of the authorised development

(4) The undertaker shall, at its sole cost

- (a) implement the Approved ATS mitigation scheme prior to the erection of any part of any wind turbine generator forming part of the authorised development;
- (b) thereafter maintain, including without limitation resolving any failure (howsoever caused) of the Approved ATS mitigation scheme throughout the lifetime of the authorised development; and
- (c) in the event of any amendment being made to the authorised development which gives rise to adverse impacts on the operation of Warton Aerodrome which are materially new or materially different to those identified by the environmental statement, work with the CAA and the operator in good faith to implement and to thereafter maintain any

additional mitigation measures required to prevent or remove such adverse impacts throughout the lifetime of the authorised development.

#### **Warton Aerodrome Primary Surveillance Radar**

6.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until a radar mitigation scheme has been submitted to and approved in writing by the Secretary of State, in consultation with the MoD and the Operator.

(2) For the purposes of this requirement:—

“approved radar mitigation scheme” means the radar mitigation scheme as approved by the Secretary of State in accordance with sub-paragraph (1) of this requirement;

“MoD” means the Ministry of Defence as represented by Defence Infrastructure Organisation – Safeguarding, St George’s House, DIO Head Office, DMS, Whittington, Lichfield, Staffordshire WS14 9PY or any successor body;

“operator” means BAE Systems (Operations) Limited (incorporated in England and Wales with company number 01996687, whose registered office is at Victory Point, Lyon Way, Frimley, Camberley, Surrey GU16 7EX) or such other organisation as is licensed from time to time under sections 5 and 6 of the Transport Act 2000 to provide air traffic services at Warton Aerodrome or any organisation employed by BAE Systems (Operations) Limited to provide an air traffic service at Warton Aerodrome;

“PSR” means the Primary Surveillance Radar at Warton Aerodrome or any upgrade thereto or replacement thereof;

“PSR air traffic control operations” means the air traffic control operations, including both civil and military aircraft operations, of the MoD or the operator (or both) which are reliant upon the PSR; and

“radar mitigation scheme” means a scheme designed to prevent or remove any adverse impacts arising from the authorised development upon the operation of the PSR or PSR air traffic control operations.

(3) The Approved Radar Mitigation Scheme must remain in place and be complied with for the lifetime of the authorised development.

(4) No wind turbine generator erected as part of the authorised development shall be permitted to rotate its rotor blades about its horizontal axis other than for the purpose of testing the proposed mitigation solution identified in the approved radar mitigation scheme until the Secretary of State, following consultation with the MoD and the operator, has confirmed in writing that he/she is satisfied that:

- (a) the proposed mitigation solution has been subject to technical and operational assessment and, in particular, has undergone ‘in-situ’ testing in line with the requirements of (and for the time period(s) specified in) the approved radar mitigation scheme;
- (b) the performance criteria required to be met by the proposed mitigation solution, as specified in the approved radar mitigation scheme, have been met; and
- (c) the approved radar mitigation scheme has been implemented by the undertaker in accordance with sub-paragraph (4)(a) of this requirement.

(5) The undertaker shall, at its sole cost:

- (a) implement the approved radar mitigation scheme prior to any wind turbine generator forming part of the authorised development being permitted to rotate its rotor blades about its horizontal axis;
- (b) thereafter maintain, (including without limitation resolving any failure (howsoever caused) of the implemented mitigation solution (or any part thereof)) throughout the lifetime of the authorised development, provided that the PSR remains an operational requirement of the MoD or the Operator (or both); and
- (c) in the event of any amendment being made to the authorised development which gives rise to additional materially new or materially different adverse impacts (over and above

the impacts identified by the environmental statement) on the operation of the PSR or the PSR air traffic control operation (or both), work with the MoD and the operator in good faith to implement and to thereafter maintain any additional mitigation measures required to prevent or remove such adverse impacts for so long as any of the wind turbine generators forming part of the authorised development are operational and provided that the PSR remains an operational requirement of the MoD or the Operator (or both).

#### **Air traffic services at Walney Aerodrome**

7.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until:

- (a) an ATS mitigation scheme has been submitted to and approved in writing by the Secretary of State, in consultation with the CAA and the operator; and
- (b) the Secretary of State, following consultation with the CAA and the operator, has confirmed in writing that he/she is satisfied that the approved ATS mitigation scheme has been implemented by the undertaker in accordance with sub-paragraph (3)(a) of this requirement.

(2) For the purposes of this requirement—

“approved ATS mitigation scheme” means the ATS mitigation scheme as approved by the Secretary of State in accordance with sub-paragraph 1;

“ATS mitigation scheme” means a scheme which is designed to prevent or remove any adverse impacts arising from the authorised development on the operation of Walney Aerodrome, including but not limited to:

- (a) the Aerodrome’s ability to provide and deliver, on an uninterrupted basis
  - (i) national sovereign defence capabilities;
  - (ii) safe airport operational and air traffic services that are fit for purpose for both civil and military aircraft operations; and
  - (iii) any other operational requirements which are identified by the operator; and
- (b) the Aerodrome’s IFP, MSA and VHF communication systems, such scheme to remain in place throughout the lifetime of the authorised development and for so long as any part of the authorised development remains in situ;

“CAA” means the Civil Aviation Authority constituted by the Civil Aviation Act 1982;

“IFP” means instrument flight procedures;

“MSA” means minimum sector altitude;

“operator” means BAE Systems Marine Limited (incorporated in England and Wales with company number 00229770, whose registered office is at Victory Point, Lyon Way, Frimley, Camberley, Surrey GU16 7EX) or such other organisation as is licensed from time to time under sections 5 and 6 of the Transport Act 2000 to provide air traffic services at Walney Aerodrome or any organisation employed by BAE Systems Marine Limited to provide an air traffic service at Walney Aerodrome; and

“VHF” means very high frequency.

(3) The Approved ATS Mitigation Scheme must remain in place and be complied with for the lifetime of the authorised development.

(4) The undertaker shall, at its sole cost –

- (a) implement the approved ATS mitigation scheme prior to the erection of any part of any wind turbine generator forming part of the authorised development;
- (b) thereafter maintain, including without limitation resolving any failure (howsoever caused) of the approved ATS mitigation scheme throughout the lifetime of the authorised development; and
- (c) in the event of any amendment being made to the authorised development which gives rise to adverse impacts on the operation of Walney Aerodrome which are materially new



or materially different to those identified by the environmental statement, work with the CAA and the operator in good faith to implement and to thereafter maintain any additional mitigation measures required to prevent or remove such adverse impacts throughout the lifetime of the authorised development.

#### **Air traffic services at Isle of Man Airport**

8.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until the Secretary of State, having consulted with the operator and the Isle of Man Civil Aviation Administration, confirms in writing that either—

- (a) no appropriate mitigation is required in respect of the authorised development; or
- (b) an appropriate mitigation scheme will be implemented and maintained for the life of the authorised development.

(2) For the purposes of this requirement—

“appropriate mitigation scheme” means a scheme agreed with the operator which sets out measures taken to prevent or remove any adverse impacts of the authorised development on the Isle of Man Primary Surveillance Radar and air traffic management operations and the operator’s ability to provide safe and efficient air traffic services for Isle of Man Airport during the life of the authorised development; and

“operator” means Isle of Man Airport or such other organisation as is licensed from time to time to provide air traffic services for Isle of Man Airport.

(3) The undertaker shall thereafter comply with all obligations contained within the approved mitigation for the life of the authorised development.

#### **Operation of Blackpool Airport**

9.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until the Secretary of State, having consulted with the Operator and the Civil Aviation Authority, confirms in writing that it is satisfied that—

- (a) appropriate mitigation will be implemented and maintained throughout the lifetime of the authorised development; and
- (b) appropriate arrangements have been put in place with the operator to ensure that such appropriate mitigation is so implemented prior to construction of any wind turbine generator and thereafter maintained.

(2) For the purposes of this requirement—

“appropriate mitigation” means measures to prevent or remove any adverse impacts which the authorised development will have on the ability of the operator to provide safe airport operational and air traffic services (including but not limited to any adverse impacts on instrument flight procedures, minimum sector altitudes, and very high frequency radio and direction finding communication systems) for Blackpool Airport;

“approved mitigation” means the appropriate mitigation agreed with the operator and confirmed by the Secretary of State in accordance with sub-paragraph (1); and

“operator” means Blackpool Airport Operations Limited (incorporated in England and Wales with company number 09307995 and whose registered office is Number One Bickerstaffe Square, Talbot Road, Blackpool, FY1 3AH), or such other organisation as is licensed from time to time under sections 5 and 6 of the Transport Act 2000 to provide air traffic services for Blackpool Airport; and

“VHF” means very high frequency.

(3) The undertaker shall thereafter comply with all obligations contained within the approved appropriate mitigation for the lifetime of the authorised development.

## **Decommissioning**

10. No works may commence until a written decommissioning programme in compliance with any notice served upon the undertaker by the Secretary of State pursuant to section 105(2) (requirement to prepare decommissioning programmes) of the 2004 Act has been submitted to the Secretary of State.

## **Requirement for written approval**

11. Where under any of the above requirements the approval or agreement of the Secretary of State or another person is required, that approval or agreement must be given in writing.

## **Amendments to approved details**

12. With respect to any requirement which requires the authorised project to be carried out in accordance with the details approved under this Schedule, the approved details are taken to include any amendments that may subsequently be approved or agreed by the Secretary of State, or another person.

# **SCHEDULE 3**

Article 5

## **Deemed Marine Licence under the 2009 Act – Licence 1: Wind Turbine Generators and Associated Infrastructure**

### **PART 1**

#### **Licensed marine activities**

## **Interpretation**

1.—(1) In this licence—

“1989 Act” means the Electricity Act 1989(a);

“2004 Act” means the Energy Act 2004(b);

“2008 Act” means the Planning Act 2008(c);

“2009 Act” means the Marine and Coastal Access Act 2009(d);

“Annex I reef” means a reef of a type listed in Annex I to Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora;

“address” includes any number or address used for the purposes of electronic transmission;

“ancillary works” means the ancillary works described in Part 2 of Schedule 1 (ancillary works) and any other works authorised by this Order that are not development within the meaning of section 32 of the 2008 Act;

“authorised deposits” means the substances and articles specified in paragraph 4 of Part 1 of this licence;

“authorised scheme” means Work No. 1, Work No.2 and Work No. 3 and the further associated development described in paragraph 3 of Part 1 of this licence or any part of that work or development;

---

(a) 1989 c.29.

(b) 2004 c.20.

(c) 2008 c.29.

(d) 2009 c.23.

“bank holiday” means a bank holiday in England and Wales under section 1 of the Banking and Financial Dealings Act 1971(a);

“buoy” means any floating device used for navigational purposes or measurement purposes, including but not limited to wave buoys, LiDAR and guard buoys;

“cable” means up to 400kV cables for the transmission of electricity and includes fibre optic and other communications cables either within the cable or laid alongside;

“cable crossings” means the crossing of sub-sea cables, pipelines or other existing infrastructure by the cables (including inter-array cables) authorised by this Order together with cable protection;

“cable protection” means measures to protect cables from physical damage including but not limited to concrete mattresses, with or without frond devices, and/or rock placement, the use of bagged solutions filled with grout or other materials;

“chemicals” comprise both substances and preparations;

“commence” means the first carrying out of any licensed activities, save for pre-construction surveys, monitoring surveys, unexploded ordnance surveys and clearance of low order unexploded ordnance, and “commenced” and “commencement” must be construed accordingly;

“commercial operation” means in relation to any part of the authorised scheme, the exporting, transmission or conversion, on a commercial basis, of electricity;

“condition” means a condition in part 2 of this licence;

“electronic transmission” means a communication transmitted—

(a) by means of an electronic communications network; or

(b) by other means but while in electronic form;

“environmental statement” means the document certified as the environmental statement by the Secretary of State under article 11 (certification of plans, etc.) of the Order;

“foundation” means any of: a multi-leg pin-piled jacket, multi-leg suction bucket jacket, or gravity base foundation;

“gravity base foundation” means a structure principally of steel, concrete, or steel and concrete with a base which rests on the seabed either due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“HAT” means highest astronomical tide;

“high order unexploded ordnance clearance” means an unexploded ordnance clearance method which intentionally seeks to detonate the unexploded ordnance;

“inter-array cables” means the cables linking the wind turbine generators to each other and to the offshore substation platforms;

“interconnector cables” means the cables linking the offshore substation platforms to each other;

“intrusive activities” means activities including anchoring of vessels, jacking up of vessels, temporary deposits and temporary wet storage areas;

“jacket foundation” means a steel jacket/lattice-type structure constructed principally of steel, fixed to the seabed with pin-piles or steel suction buckets and associated equipment including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“km” means kilometres;

“LAT” means lowest astronomical tide;

“layout principles” means the layout principles contained within Table 3.7 of the environmental statement project description referred to as document S\_D6\_15 in Schedule 5;

---

(a) 1971 c.80.

“LiDAR” means a light detection and ranging system used to measure weather and sea conditions;

“licence 2” means the marine licence set out in Schedule 4 (Deemed marine licence under the 2009 Act – Licence 2: Offshore Substation Platforms and Interconnector Cables);

“licenced activities” means those activities specified in Part 1 of this licence;

“low order unexploded ordnance clearance” means an unexploded ordnance clearance method which does not seek to detonate the unexploded ordnance;

“m” means metres and “m<sup>2</sup>” means metres squared;

“maintain” includes inspect, upkeep, repair, adjust or alter the authorised scheme, and remove, reconstruct or replace any part of the authorised scheme, to the extent assessed in the environmental statement; and any derivative of “maintain” is to be construed accordingly;

“Marine Management Organisation” means the body created under the 2009 Act which is responsible for the regulation of this licence or any successor of that function and “MMO” must be construed accordingly;

“MCA” means the Maritime and Coastguard Agency, the executive agency of the Department for Transport;

“MCMS” means the Marine Case Management System web portal provided and operated by the MMO;

“measures to minimise disturbance to marine mammals and rafting birds from transiting vessels” means the document certified as the measures to minimise disturbance to marine mammals and rafting birds from transiting vessels by the Secretary of State under article 11 (certification of plans, etc.) for the purposes of this Order;

“offshore in principle monitoring plan” means the document certified as the offshore in principle monitoring plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“offshore order limits and grid coordinates plan” means the document certified as the offshore order limits and grid coordinates plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“offshore substation platform” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and open with modular equipment or fully clad, containing—

(c) electrical equipment required to switch, transform or convert electricity generated at the wind turbine generators to a higher voltage and provide reactive power compensation, including high voltage power transformers, high voltage switchgear and busbars, substation auxiliary systems and low voltage distribution, instrumentation, metering equipment and control systems, standby generators, shunt reactors, auxiliary and uninterruptible power supply systems; and

(d) accommodation, storage, workshop auxiliary equipment and facilities for operating, maintaining and controlling the substation or wind turbine generators, including navigation, aviation and safety marketing and lighting, systems for vessel charging, access and retrieval, cranes, potable water supply, black water separation, stores, fuels and spares, communications systems and control hub facilities and other associated equipment and facilities;

“offshore surface structures” means offshore substation platforms and wind turbine generators;

“Order” means the Morgan Offshore Wind Project: Generation Assets Order 202[•];

“Order limits” means the limits shown on the offshore order limits and grid coordinates plan within which the authorised scheme may be carried out;

“outline environmental management plan” plan means the document certified as the outline environmental management plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline fisheries liaison and co-existence plan” plan means the document certified as the outline fisheries liaison and co-existence plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline marine mammal mitigation protocol” means the document certified as the outline marine mammal mitigation protocol by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore construction method statement” means the document certified as the outline offshore construction method statement by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore written scheme of investigation for archaeology” plan means the document certified as the outline offshore written scheme of investigation for archaeology by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore operations and maintenance plan” plan means the document certified as the outline offshore operations and maintenance plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline underwater sound management strategy” means the document certified as the outline underwater sound management strategy by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline vessel traffic management plan” means the document certified as the outline vessel traffic management plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“operation” means the undertaking of activities authorised by this Order which are not part of the construction, commissioning or decommissioning of the authorised development;

“pathway to the marine environment” means open systems or closed systems that require top up;

“pin-piles” means steel or concrete cylindrical piles driven and/or drilled into the seabed to secure jacket foundations;

“preparation” means a mixture or solution composed of two or more substances;

“scour protection” means measures to prevent loss of seabed sediment around any structure placed in or on the seabed including by the use of bagged solutions, filled with grout or other materials, protective aprons, mattresses with or without frond devices and rock and gravel placement;

“substance” means a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition;

“suction bucket foundation” means a tubular steel structure which partially or fully penetrates the seabed and associated equipment, including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“statutory historic body” means an organisation charged by the government with advising on matters related to historic buildings and monuments;

“statutory nature conservation body” means an organisation charged by the government with advising on nature conservation matters;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“UKHO” means the United Kingdom Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

“undertaker” means Morgan Offshore Wind Limited (company registration number: 13497271) whose registered office address is Chertsey Road, Sunbury on Thames, Middlesex, United Kingdom, TW16 7BP;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil

vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“wind turbine generator” means a structure comprising a tower, rotor with three blades connected at the hub, nacelle and ancillary electrical and other equipment which may include J-tube(s), transition piece, access and rest platforms, access ladders, boat access systems, corrosion protection systems, fenders and maintenance equipment, helicopter landing facilities and other associated equipment including communications equipment, fixed to a foundation or transition piece;

“works plan” means the plans certified as the works plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order.

(2) In this licence a reference to any statute, order, regulation or similar instrument is a reference to a statute, order, regulation or instrument as amended by any subsequent statute, order, regulation or instrument or as contained in any subsequent re-enactment.

(3) In this licence, unless otherwise indicated—

(a) all times are Greenwich Mean Time (“GMT”); and

(b) all coordinates are latitude and longitude degrees and minutes to two decimal places.

(4) Unless otherwise stated or agreed with the MMO, all notifications must be sent by the undertaker to the MMO using MCMS. Except where otherwise notified in writing by the relevant organisation, the addresses for correspondence for the purposes of this Schedule are—

(a) Centre for Environment, Fisheries and Aquaculture Science

Pakefield Road

Lowestoft

Suffolk

NR33 0HT

Tel: 01502 562 244

(b) Historic England

4th Floor

Cannon Bridge House

25 Dowgate Hill

London

EC4R 2YA.

Tel: 0161 421 416

Email: [northwest@historicengland.org.uk](mailto:northwest@historicengland.org.uk)

(c) Marine Management Organisation

Marine Licensing Team

Lancaster House

Hampshire Court

Newcastle upon Tyne

NE4 7YH

Tel: 0300 231 1032

Email: [marine.consents@marinemangement.org.uk](mailto:marine.consents@marinemangement.org.uk)

(d) Marine Management Organisation (local office)

Lutra House

Dodd Way

Walton Summit



- Preston  
PR5 8BX  
Tel: 02080 265 643  
Email: preston@marinemanagement.org.uk
- (e) Marine Management Organisation  
Marine Pollution Response Team  
Tel. (during office hours): 03008 002 024,  
Tel. (outside office hours): 07770 977 825 or 0845 051 8486
- (f) Maritime and Coastguard Agency  
UK Technical Services Navigation  
Spring Place  
105 Commercial Road  
Southampton  
SO15 1EG  
Email: navigationsafety@mcga.gov.uk
- (g) Natural England  
Foss House  
Kings Pool  
1-2 Peasholme Green  
York  
YO1 7PX  
Tel: 03000 604 911
- (h) Trinity House  
Tower Hill  
London  
EC3N 4DH  
Tel: 020 7481 6900
- (i) United Kingdom Hydrographic Office  
Admiralty Way  
Taunton  
Somerset  
TA1 2DN  
Tel: 01823 337 900

### **Details of licensed marine activities**

2. Subject to the conditions, this licence authorises the undertaker (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities under section 66(1) (licensable marine activities) of the 2009 Act—

- (a) the deposit at sea of the substances and objects specified in paragraph 4 below;
- (b) the construction of works in or over the sea or on or under the seabed;
- (c) dredging for the purposes of seabed preparation for foundation works or cable works;
- (d) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;

- (e) site clearance and preparation works including clearance of debris, boulder clearance and the removal of out of service cables and static fishing equipment;
- (f) low order unexploded ordnance clearance;
- (g) the use of extracted seabed material within gravity base foundations; and
- (h) the disposal of up to 15,694,606 cubic metres of inert material of natural origin within the Order limits produced during construction drilling or seabed preparation for foundation works, cable works and boulder clearance works at disposal site reference IS155 within the extent of the Order limits seaward of MHWS, unless otherwise agreed in writing with the MMO.

3. Such activities are authorised in relation to the construction, maintenance and operation of the authorised scheme being—

*Work No. 1*—an offshore wind generating station comprising:

- (a) up to 96 wind turbine generators; and
- (b) a network of subsea inter-array cables between the wind turbine generators including cable crossings and cable protection;

*Work No. 2*—up to four offshore substation platforms (all or any of which may alternatively be constructed under licence 2); and

*Work No. 3*—a network of subsea interconnector cables between the offshore substation platforms including cable crossings and cable protection (which may alternatively be constructed under licence 2).

In connection with the licenced activities in Work Nos. 1 to 3 and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised scheme and which fall within the scope of the work assessed by the environmental statement, including—

- (c) scour protection around the foundations of the offshore structures;
- (d) cable protection measures such as rock placement and the placement of rock and/or concrete mattresses, with or without frond devices;
- (e) dredging;
- (f) the removal of material from the seabed and the disposal of inert material of natural origin and/or dredged material within the Order limits produced during construction drilling and seabed preparation for foundation works, cable installation preparation such as sandwave clearance, boulder clearance and pre-trenching; and
- (g) creation and use of temporary vessel laydown areas and use of cable anchors;
- (h) temporary landing places, moorings or other means of accommodating vessels in the construction or maintenance of the authorised scheme;
- (i) removal of static fishing equipment;
- (j) the use of extracted seabed material within gravity base foundations;
- (k) lighting; and
- (l) buoys, beacons, fenders and other navigational warning or ship impact protection works.

4. The substances and objects authorised for deposit at sea are—

- (a) iron, steel, copper and aluminium;
- (b) stone and rock;
- (c) concrete and grout;
- (d) sand and gravel;
- (e) plastic and synthetic;
- (f) material extracted from within the Order limits during construction drilling or seabed preparation for foundation works and cable sandwave preparation works; and

(g) marine coatings, other chemicals and timber.

5. The grid coordinates for Work No.1, Work No.2 and Work No.3 are as shown on the order limits and grid coordinates plan and as specified below—

| <i>Point</i> | <i>Latitude</i>   | <i>Longitude</i> |
|--------------|-------------------|------------------|
| 1            | 53° 54' 27.788" N | 3° 58' 8.915" W  |
| 2            | 53° 54' 41.257" N | 3° 58' 42.184" W |
| 3            | 53° 57' 6.032" N  | 4° 3' 55.525" W  |
| 4            | 53° 57' 7.936" N  | 4° 4' 25.017" W  |
| 5            | 53° 57' 13.636" N | 4° 5' 53.497" W  |
| 6            | 53° 58' 7.549" N  | 4° 7' 48.094" W  |
| 7            | 54° 0' 28.539" N  | 4° 12' 48.480" W |
| 8            | 54° 0' 33.128" N  | 4° 12' 41.699" W |
| 9            | 54° 0' 39.541" N  | 4° 12' 32.331" W |
| 10           | 54° 0' 49.220" N  | 4° 12' 18.682" W |
| 11           | 54° 0' 58.979" N  | 4° 12' 5.399" W  |
| 12           | 54° 1' 0.852" N   | 4° 12' 2.795" W  |
| 13           | 54° 1' 10.663" N  | 4° 11' 49.441" W |
| 14           | 54° 1' 20.488" N  | 4° 11' 36.537" W |
| 15           | 54° 1' 26.187" N  | 4° 11' 24.779" W |
| 16           | 54° 1' 31.886" N  | 4° 11' 13.315" W |
| 17           | 54° 1' 33.367" N  | 4° 11' 10.387" W |
| 18           | 54° 1' 34.438" N  | 4° 11' 8.270" W  |
| 19           | 54° 1' 39.125" N  | 4° 10' 59.214" W |
| 20           | 54° 1' 41.978" N  | 4° 10' 53.701" W |
| 21           | 54° 1' 42.739" N  | 4° 10' 52.231" W |
| 22           | 54° 1' 47.148" N  | 4° 10' 43.936" W |
| 23           | 54° 1' 48.940" N  | 4° 10' 40.404" W |
| 24           | 54° 1' 57.247" N  | 4° 10' 24.352" W |
| 25           | 54° 2' 5.706" N   | 4° 10' 8.569" W  |
| 26           | 54° 2' 11.564" N  | 4° 9' 57.954" W  |
| 27           | 54° 2' 14.425" N  | 4° 9' 52.857" W  |
| 28           | 54° 2' 14.433" N  | 4° 9' 52.843" W  |
| 29           | 54° 2' 14.446" N  | 4° 9' 52.820" W  |
| 30           | 54° 2' 23.202" N  | 4° 9' 37.580" W  |
| 31           | 54° 2' 23.221" N  | 4° 9' 37.547" W  |
| 32           | 54° 2' 23.229" N  | 4° 9' 37.534" W  |
| 33           | 54° 2' 23.238" N  | 4° 9' 37.518" W  |
| 34           | 54° 2' 23.239" N  | 4° 9' 37.517" W  |
| 35           | 54° 2' 32.133" N  | 4° 9' 22.564" W  |
| 36           | 54° 2' 32.146" N  | 4° 9' 22.542" W  |
| 37           | 54° 2' 32.159" N  | 4° 9' 22.521" W  |
| 38           | 54° 2' 32.166" N  | 4° 9' 22.509" W  |
| 39           | 54° 2' 32.172" N  | 4° 9' 22.500" W  |
| 40           | 54° 2' 41.223" N  | 4° 9' 7.804" W   |
| 41           | 54° 2' 41.236" N  | 4° 9' 7.782" W   |
| 42           | 54° 2' 41.249" N  | 4° 9' 7.761" W   |
| 43           | 54° 2' 41.257" N  | 4° 9' 7.749" W   |
| 44           | 54° 2' 41.263" N  | 4° 9' 7.739" W   |
| 45           | 54° 2' 50.489" N  | 4° 8' 53.271" W  |

|    |                   |                  |
|----|-------------------|------------------|
| 46 | 54° 2' 59.863" N  | 4° 8' 39.076" W  |
| 47 | 54° 3' 9.407" N   | 4° 8' 25.119" W  |
| 48 | 54° 3' 19.079" N  | 4° 8' 11.466" W  |
| 49 | 54° 3' 28.890" N  | 4° 7' 58.099" W  |
| 50 | 54° 3' 38.836" N  | 4° 7' 45.024" W  |
| 51 | 54° 3' 48.923" N  | 4° 7' 32.234" W  |
| 52 | 54° 3' 52.208" N  | 4° 7' 28.172" W  |
| 53 | 54° 3' 56.043" N  | 4° 7' 23.528" W  |
| 54 | 54° 3' 59.107" N  | 4° 7' 19.782" W  |
| 55 | 54° 3' 59.122" N  | 4° 7' 19.764" W  |
| 56 | 54° 3' 59.130" N  | 4° 7' 19.754" W  |
| 57 | 54° 4' 1.160" N   | 4° 7' 17.353" W  |
| 58 | 54° 4' 1.181" N   | 4° 7' 17.328" W  |
| 59 | 54° 4' 6.734" N   | 4° 7' 10.779" W  |
| 60 | 54° 4' 7.781" N   | 4° 7' 9.560" W   |
| 61 | 54° 4' 9.456" N   | 4° 7' 7.587" W   |
| 62 | 54° 4' 13.935" N  | 4° 7' 2.501" W   |
| 63 | 54° 4' 16.028" N  | 4° 7' 0.112" W   |
| 64 | 54° 4' 18.943" N  | 4° 6' 56.806" W  |
| 65 | 54° 4' 19.913" N  | 4° 6' 55.716" W  |
| 66 | 54° 4' 24.700" N  | 4° 6' 50.475" W  |
| 67 | 54° 4' 30.489" N  | 4° 6' 44.156" W  |
| 68 | 54° 4' 35.097" N  | 4° 6' 39.269" W  |
| 69 | 54° 4' 40.000" N  | 4° 6' 34.145" W  |
| 70 | 54° 4' 41.189" N  | 4° 6' 32.904" W  |
| 71 | 54° 4' 45.972" N  | 4° 6' 28.021" W  |
| 72 | 54° 3' 42.182" N  | 4° 0' 24.131" W  |
| 73 | 54° 0' 25.772" N  | 3° 53' 55.337" W |
| 74 | 53° 58' 34.172" N | 3° 47' 19.232" W |
| 75 | 53° 56' 34.760" N | 3° 47' 14.121" W |

6. This marine licence remains in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 (approval of decommissioning programmes) of the 2004 Act including any modification to the programme under section 108 (reviews and revisions of decommissioning programmes) of the 2004 Act, and the completion of such programme has been confirmed by the Secretary of State in writing.

7. The provisions of section 72 (variation, suspension, revocation and transfer) of the 2009 Act apply to this licence except that the provisions of section 72(7) and (8) relating to the transfer of the licence apply only to a transfer not falling within article 7 (benefit of order) of the Order.

8. With respect to any condition which requires the licensed activities be carried out in accordance with the details, plans or schemes approved under this licence, the approved details, plans or schemes are taken to include any amendments that may subsequently be approved in writing by the MMO.

9. Any amendments to or variations from the approved details, plans or schemes must be in accordance with the principles and assessments set out in the environmental statements. Such agreement may only be given where it has been demonstrated to the satisfaction of the MMO that it is unlikely to or will not give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

## PART 2

### Conditions

#### Design parameters

10. —(1) The authorised scheme must be constructed in accordance with the parameters assessed in the environmental statement and set out in Table 2.

(2) References to the location of an offshore surface structure in Table 2 is a reference to the centre point of that structure.

**Table 2**

| <i>Parameter</i>                                                                                                       | <i>Value</i> |
|------------------------------------------------------------------------------------------------------------------------|--------------|
| Maximum number of wind turbine generators                                                                              | 96           |
| Maximum height of wind turbine generators when measured from LAT to the tip of the vertical blade (m)                  | 364          |
| Maximum rotor diameter of each wind turbine generator (m)                                                              | 320          |
| Maximum rotor swept area (m <sup>2</sup> )                                                                             | 5,468,884    |
| Minimum distance from LAT to the lowest point of the rotating blade for each turbine (m)                               | 34           |
| Minimum distance from HAT to the lowest point of the rotating blade for each turbine (m)                               | 26           |
| Minimum distance between offshore surface structures (in all directions) (m)                                           | 1,400        |
| Maximum diameter of pin-piles for wind turbine generators on jacket pin-pile foundations (m)                           | 5.5          |
| Maximum diameter of gravity base at the seabed for wind turbine generators on gravity base foundations (m)             | 49           |
| Maximum diameter of buckets for wind turbine generators on suction bucket jackets (m)                                  | 18           |
| Maximum diameter of pin-piles for offshore substation platforms on jacket pin-pile foundations (m)                     | 5.5          |
| Maximum diameter of gravity base at the seabed for offshore substation platforms on gravity base foundations (m)       | 80           |
| Maximum diameter of buckets for offshore substation platforms on suction bucket jackets (m)                            | 18           |
| Maximum number of wind turbines on jacket driven pin-pile foundations                                                  | 64           |
| Maximum volume of extracted seabed material to be used in gravity base foundations (m <sup>3</sup> )                   | 490,000      |
| Maximum total seabed footprint of wind turbine generators (including scour protection) (m <sup>2</sup> )               | 735,488      |
| Maximum volume of scour protection for wind turbine generators (m <sup>3</sup> )                                       | 1,701,998    |
| Maximum volume of scour protection for offshore substation foundations (m <sup>3</sup> )                               | 58,361       |
| Maximum number of offshore substation platforms                                                                        | 4            |
| Maximum dimensions of offshore substations (excluding towers, helipads, masts, and cranes):                            |              |
| (a) Height when measured from LAT (m)                                                                                  | 70           |
| (b) Length (m)                                                                                                         | 80           |
| (c) Width (m)                                                                                                          | 60           |
| Maximum total seabed footprint area for offshore substation foundations (including scour protection) (m <sup>2</sup> ) | 24,964       |
| Maximum total length of cables (inter-array and interconnector) (km)                                                   | 450          |

|                                                                                       |         |
|---------------------------------------------------------------------------------------|---------|
| Maximum number of cable crossings (inter-array and interconnector)                    | 20      |
| Maximum volume of cable protection (inter-array and interconnector) (m <sup>3</sup> ) | 852,600 |
| Maximum total seabed footprint area for cable protection (m <sup>2</sup> )            | 548,800 |

11. The total number of offshore substation platforms forming part of the authorised scheme in this licence and the authorised scheme in licence 2 taken together must not exceed four (whether constructed under this licence or licence 2).

12. The total length of interconnector cables forming part of the authorised scheme in this licence and the authorised scheme in licence 2 taken together must not exceed 60 kilometres (whether constructed under this licence or licence 2).

### **Maintenance of the authorised scheme**

13. —(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.

(2) Maintenance works include but are not limited to—

- (a) major wind turbine component or offshore substation platform replacement;
- (b) painting and applying other coatings to wind turbine generators or offshore substation platforms;
- (c) bird waste and marine growth removal;
- (d) cable remedial burial;
- (e) cable repairs and replacement;
- (f) access ladder and boat landing replacement;
- (g) wind turbine generator and offshore substation platform anode replacement; and
- (h) J-tube repair/replacement.

(3) An operations and maintenance plan in accordance with the outline offshore operations and maintenance plan must be submitted to the MMO for approval in writing at least six months prior to commencement of the operation of licensed activities and must provide for review and resubmission every three years during the operational phase.

(4) All operation and maintenance activities must be carried out in accordance with the plan approved under sub-paragraph (3).

(5) An annual maintenance report must be submitted to the MMO in writing within one month following the first anniversary of the date of commencement of operations, and every year thereafter until the permanent cessation of operation.

(6) The annual maintenance report in sub-paragraph (5) must provide a record of the licenced activities during the preceding year, the timing of activities and methodologies used.

(7) Unless otherwise agreed in writing with the MMO, every fifth year the undertaker must submit to the MMO in writing, within one month of that date, a consolidated maintenance report which will—

- (a) Include a review of licenced activities undertaken during the preceding five years with reference to the reports submitted in accordance with sub-paragraph (5) of this licence; and
- (b) Reconfirm the applicability of the methodologies and frequencies of the licensable activities permitted by this licence for the remaining duration of this licence.

### **Extension of time periods**

14. Any time period given in this licence to either the undertaker or the MMO may be extended with the agreement of the other party such agreement not to be unreasonably withheld or delayed.



## Notifications and inspections

- 15.—(1) The undertaker must ensure that—
- (a) a copy of this licence (issued as part of the grant of the Order) and any subsequent amendments or revisions to it is provided to—
    - (i) all agents and contractors notified to the MMO in accordance with condition 26;
    - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 26;
  - (b) within 28 days of receipt of a copy of this licence those persons referred to in paragraph (a) must confirm receipt of this licence in writing to the MMO.
- (2) Only those persons and vessels notified to the MMO in accordance with condition 26 are permitted to carry out the licensed activities.
- (3) Copies of this licence must also be available for inspection at the following locations—
- (a) the undertaker's registered address;
  - (b) any site office located at or adjacent to the construction site and used by the undertaker or its agents and contractors responsible for the loading, transportation or deposit of the authorised deposits; and
  - (c) on board each vessel and at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.
- (4) The documents referred to in sub-paragraph (1)(a) must be available for inspection by an authorised enforcement officer at the locations set out in sub-paragraph (3)(b).
- (5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during the construction and operation of the authorised scheme.
- (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 and within five days of the completion of the licensed activity.
- (7) The Kingfisher Information Service of Seafish must be informed of details of the vessel routes, timings and locations relating to the construction of the authorised scheme or part thereof by including the information in a notice via their portal (<https://kingfisherbulletin.org/submit-notice>) and by email to [kingfisher@seafish.co.uk](mailto:kingfisher@seafish.co.uk) —
- (a) at least 14 days prior to the commencement of offshore activities, for inclusion in the Kingfisher Fortnightly Bulletin and offshore hazard awareness data; and
  - (b) as soon as reasonably practicable and no later than 24 hours after completion of the authorised scheme
- and confirmation of notification must be provided to the MMO within five days.
- (8) The undertaker must ensure that a local notification to mariners is issued at least 14 days prior to the commencement of the authorised scheme or any part thereof advising of the start date and the expected vessel routes from the construction ports to the relevant location. Copies of all notices must be provided to the MMO, MCA Trinity House and UKHO within five days.
- (9) The undertaker must ensure that local notifications to mariners are updated and reissued at weekly intervals during construction activities and at least five days before any planned operations and maintenance works (or otherwise agreed) and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction programme and monitoring plan approved under conditions 20(1)(b) and 20(1)(c). Copies of all notices must be provided to the MMO and UKHO within five days.
- (10) The undertaker must notify UKHO of completion (within 14 days) of the authorised scheme or any part thereof in order that all necessary amendments are made to nautical charts. Copies of all notices must be provided to the MMO and MCA within five days.

(11) In case of damage to, or destruction or decay of, the authorised scheme or any part thereof, excluding the exposure of cables and faults, the undertaker must as soon as reasonably practicable and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify the MMO, MCA, Trinity House, the Kingfisher Information Service of Seafish, regional fisheries contact and UKHO.

(12) In case of buried cables becoming exposed on or above the seabed, the undertaker must within three days following identification of a cable exposure, notify mariners regional fisheries contact and the Kingfisher Information Service of Seafish of the location and extent of exposure. Copies of all notices must be provided to the MMO, MCA, Trinity House, and UKHO within five days.

(13) The undertaker must ensure that the MMO, the MMO Local Office, local fishermen's organisations, and the Source Data Receipt Team at the UKHO Taunton, Somerset, TA1 2DN (sdr@ukho.gov.uk) are notified within five days of each instance of cable repair, replacement or protection replenishment activity.

### **Aids to navigation**

16.—(1) The undertaker must during the period from commencement of construction of the authorised scheme to completion of decommissioning exhibit such lights, marks, sounds, signals and other aids to navigation, and take such other steps for the prevention of danger to navigation, as Trinity House may from time to time direct.

(2) The undertaker must during the period from commencement of construction of the authorised scheme to completion of decommissioning keep Trinity House and the MMO informed of progress of the authorised scheme including—

- (a) notice of commencement of construction of the authorised scheme within 24 hours of commencement having occurred;
- (b) notice within 24 hours of any aids to navigation being established by the undertaker; and
- (c) notice within five days of completion of construction of the authorised scheme.

(3) The undertaker must provide reports to Trinity House on the availability of aids to navigation in accordance with the frequencies set out in the aids to navigation management plan agreed pursuant to condition 20 (1)(f) using the reporting system provided by Trinity House.

(4) The undertaker must during the period from commencement of construction of the authorised scheme to completion of decommissioning notify Trinity House and the MMO of any failure of the aids to navigation and the timescales and plans for remedying such failures, as soon as possible and no later than 24 hours following the undertaker becoming aware of any such failure.

(5) In the event that the provisions of condition 15(11) are invoked, the undertaker must lay down such buoys, exhibit such lights and take such other steps for preventing danger to navigation as directed by Trinity House.

### **Colouring of structures**

17. Except as otherwise required by Trinity House the undertaker must paint all structures forming part of the authorised scheme yellow (colour code RAL 1023) from at least HAT to a height as directed by Trinity House. Unless the MMO otherwise directs, the undertaker must paint the remainder of the structures grey (colour code RAL 7035).

### **Chemicals, drilling and debris**

18.—(1) The undertaker must ensure that any coatings and treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by the Health and Safety Executive and the Environment Agency Pollution Prevention Control Guidelines.

(2) The storage, handling, transport and use of fuels, lubricants, chemicals and other substances must be undertaken so as to prevent releases into the marine environment, including bunding of 110 percent of the total volume of all reservoirs and containers.

(3) The undertaker must inform the MMO in writing of the location and quantities of material disposed of each month under this licence by submission of a disposal return by 15 February each year for the months August to January inclusive, and by 15 August each year for the months February to July inclusive.

(4) 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 disposal site reference IS155 within the extent of the Order limits seaward of MHWS. Any other materials must be screened out before disposal of the inert material at this site.

(5) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source, free from contaminants and containing minimal fines.

(6) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost within the Order limits, the undertaker must report the loss in writing to the local enforcement office within 48 hours and if the MMO reasonably considers such material to constitute a navigation or environmental hazard (dependent on the size and nature of the material) the undertaker must, in that event, demonstrate to the MMO that reasonable attempts have been made to locate, remove or move any such material.

(7) The undertaker must ensure that no waste concrete slurry or wash water from concrete or cement works are discharged into the marine environment. Concrete and cement mixing and washing areas must be contained to prevent run off entering the water through the freeing ports.

(8) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO Marine Pollution Response Team in accordance with the marine pollution contingency plan agreed under condition 20(1)(e).

(9) Debris or dropped objects which are considered a danger or hazard to navigation must be reported as soon as reasonably practicable but no later than six hours from the undertaker becoming aware of an incident, to the relevant HM Coastguard Maritime Rescue Co-ordination Centre by telephone (0344 382 0570), and the UK Hydrographic Office email: [navwarnings@btconnect.com](mailto:navwarnings@btconnect.com).

(10) All dropped objects including those in condition 18(9), must be reported to the MMO using the dropped object procedure form (including any updated form as provided by the MMO) as soon as reasonably practicable and in any event within 24 hours of the undertaker becoming aware of an incident, unless otherwise agreed in writing with the MMO.

(11) On receipt of notification of the dropped object procedure form the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the marine environment at the undertaker's expense if reasonable to do so.

### **Force Majeure**

19.—(1) If due to stress of weather or any other cause beyond the reasonable control of the master of a vessel, and which the master of a vessel by the exercise of reasonable diligence is unable to prevent, avoid or remove, the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life or of the vessel is threatened, within 48 hours the undertaker must notify full details of the circumstances of the deposit to the MMO.

(2) The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.

### **Pre-construction plans and documentation**

20.—(1) The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) have been submitted to and

approved in writing by the MMO, in consultation with Trinity House, the MCA and UKHO as appropriate—

- (a) a design plan at a scale of between 1:25,000 and 1:50,000 in accordance with the layout principles, including detailed representation on the most suitably scaled admiralty chart, to be approved in writing by the MMO in consultation with Trinity House and the MCA setting out proposed details of the authorised scheme, including the:
  - (i) number, dimensions, specification, foundation type(s) and depth for each wind turbine generator and offshore substation platform;
  - (ii) the proposed layout of all wind turbine generators (which shall provide for two lines of orientation and otherwise be in accordance with the recommendations for layout contained in MGN654 and its annexes) and offshore substation platforms, including grid coordinates of the centre point of the proposed location for each wind turbine generator and offshore substation platform subject to up to 55m micro-siting in any direction unless otherwise agreed in writing with the MMO in consultation with the MCA and Trinity House;
  - (iii) proposed layout of all cables;
  - (iv) location and specification of all other aspects of the authorised scheme; and
  - (v) any archaeological exclusion zones or micro-siting requirements identified pursuant to condition 20(2)(d) or relating to any benthic habitats of conservation, ecological or economic importance constituting reef habitats of principal importance as listed under Section 41 of the Natural Environment and Rural Communities Act 2006,

to ensure conformity with the description of Work No. 1 and compliance with conditions 10, 11 and 12.

- (b) A construction programme to include details of—
  - (i) the proposed construction start date;
  - (ii) proposed timings for mobilisation of plant delivery of materials and installation works;
  - (iii) an indicative written construction programme for all wind turbine generators and offshore substation platforms forming part of the authorised scheme and licenced activities;
- (c) A monitoring plan (which accords with the offshore in principle monitoring plan) to include details of proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction monitoring and related reporting in accordance with conditions 27, 28 and 29 to be submitted to the MMO in accordance with the following:-
  - (i) at least six months prior to the first survey, detail of the pre-construction surveys and an outline of all proposed monitoring;
  - (ii) at least six months prior to commencement of construction, detail on construction monitoring; and
  - (iii) at least six months prior to completion of construction, details of operational monitoring, if required;

unless otherwise agreed in writing with the MMO.

- (d) an offshore construction method statement (which accords with the outline offshore construction method statement) in accordance with the construction methods assessed in the environmental statement, including details of—
  - (i) cable specification, installation and monitoring, to include—
    - (aa) the technical specification of the inter-array cables and interconnector cables,
    - (bb) a detailed cable specification and installation plan for the authorised scheme, incorporating a cable burial risk assessment. The detailed cable specification and installation plan will identify the risk of needing any cable protection that may exceed 5 percent of navigable depth referenced to Chart Datum. In the

- event that any area of cable protection exceeding 5 percent of navigable depth is identified, the cable specification and installation plan will set out details of any steps (to be determined following consultation with the MCA and Trinity House) to be taken to ensure existing and future safe navigation is not compromised; and
- (cc) details of cable monitoring including details of cable protection until the authorised scheme is decommissioned which includes a risk based approach to the management of unburied or shallow buried cables;
  - (ii) scour protection management and cable protection management including details of the need, type, sources, quantity and installation methods for scour protection and cable protection, with details updated and resubmitted for approval if changes to it are proposed following cable laying operations;
  - (iii) foundation installation methodology, including drilling methods and disposal of drill arisings and material extracted during seabed preparation for foundation and cable installation works;
  - (iv) piling methodology, in the event that driven or part-driven pile foundations are proposed to be used;
  - (v) contractors;
  - (vi) associated ancillary works; and
  - (vii) guard vessels to be employed;
- (e) an offshore environmental management plan (which accords with the outline environment management plan) to include details of—
- (i) a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents during construction and operation of the authorised scheme in relation to all activities carried out;
  - (ii) a chemical risk assessment, including information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance and standards;
  - (iii) a chemical risk assessment for all chemicals that have a pathway to the marine environment used for the marine licensed activities, outside the course of normal navigation, and are not present on the OSPAR List of Substances Used and Discharged Offshore which Are Considered to Pose Little or No Risk to the Environment (PLONOR) to be submitted to the MMO for approval no later than ten weeks prior to use of the chemicals and to include details of —
  - (iv) (aa) the function of the chemical;
  - (v) (bb) the quantities being used and the frequency of use;
  - (vi) (cc) the physical, chemical, and ecotoxicological properties;
  - (vii) waste management and disposal arrangements;
  - (viii) the appointment and responsibilities of a fisheries liaison officer;
  - (ix) a fisheries liaison and coexistence plan (which accords with the outline fisheries liaison and co-existence plan) to ensure relevant fishing fleets are notified of commencement of licensed activities pursuant to condition 15 and to address the interaction of the licensed activities with fishing activities;
  - (x) measures to minimise disturbance to marine mammals and rafting birds from transiting vessels; and
  - (xi) measures to minimise the potential spread of invasive non-native species;
- (f) an aids to navigation management plan to be agreed in writing by the MMO following consultation with Trinity House specifying how the undertaker will ensure compliance with condition 16 from the commencement of construction of the authorised scheme to the completion of decommissioning of the authorised scheme;

- (g) in the event that driven or part-driven pile foundations are proposed to be used a marine mammal mitigation protocol (in accordance with the outline marine mammal mitigation protocol), the intention of which is to prevent injury to marine mammals, following current best practice as advised by the relevant statutory nature conservation body; and
- (h) a vessel traffic management plan (in accordance with the outline vessel traffic management plan).

(2) The authorised scheme must not commence until a written scheme of archaeological investigation has been submitted to and approved by the MMO following consultation with the statutory historic body, in accordance with the outline offshore written scheme of investigation, and in accordance with industry good practice, following consultation with the statutory historic body to include—

- (a) details of responsibilities of the undertaker, archaeological consultant and contractor;
- (b) a methodology for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
- (c) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO within four months of any survey being completed;
- (d) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;
- (e) monitoring of archaeological exclusion zones during and post construction where required;
- (f) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting an OASIS (Online Access to the Index of archaeological investigations) form with a digital copy of the report within six months of completion of construction of the authorised scheme, and to notify the MMO that the OASIS form has been submitted to the National Record of the Historic Environment within two weeks of submission;
- (g) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme; and
- (h) a timetable for all further site investigations, which must allow sufficient opportunity to establish a full understanding of the historic environment within the Order limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licensed activities;

(3) Pre-commencement surveys and archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific written scheme of investigation (which must accord with the details set out in the outline offshore written scheme of investigation), which has been submitted to and approved by the MMO.

21.—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 20 must be submitted for approval at least six months before the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(2) The licensed activities must be carried out in accordance with the plans, protocols, statements, schemes and details approved under condition 20, unless otherwise agreed in writing by MMO.

### **Underwater Sound Management Strategy**

22.—(1) No driven or part-driven piling activities shall commence or low order UXO clearance can take place until an underwater sound management strategy for those activities, which accords with the outline underwater sound management strategy, has been submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body.



(2) The underwater sound management strategy submitted under sub-paragraph (1) must include details of the noise mitigation systems and/or noise abatement system that will be utilised to manage sound from driven or part-driven piling activities (or low order UXO clearance unless otherwise agreed in writing by the MMO).

(3) No driven or part-driven piling activities or low order UXO clearance may be undertaken between 15 February to 31 March (inclusive) of any year, unless the MMO provides written confirmation to the undertaker beforehand that such works can take place in all or in a specified part of the Order limits during this period or part of this period.

(4) In considering whether to provide the confirmation referred to in sub-paragraph (3) above, the MMO shall have regard to any report or reports provided to the MMO by or on behalf of the undertaker relating to such matters as additional baseline information, reduced spatial restrictions, piling management measures, installation techniques or noise propagation modelling.

(5) The underwater sound management strategy must be submitted to the MMO no later than six months prior to the commencement of the relevant activities unless otherwise agreed in writing by the MMO.

(6) The driven or part-driven piling activities and low order UXO clearance must be carried out in accordance with the approved underwater sound management strategy, unless otherwise agreed in writing by the MMO.

### **Low order unexploded ordnance clearance**

**23.**—(1) No low order unexploded ordnance clearance can take place until the following have been submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body and, in respect of the method statement, the MCA—

- (a) a method statement for low order unexploded ordnance clearance which must include—
  - (i) methodologies for—
    - (aa) identification and investigation of potential unexploded ordnance targets;
    - (bb) low order unexploded ordnance clearance; and
    - (cc) removal and disposal of large debris;
  - (ii) a plan showing the area in which clearance activities are proposed to take place;
  - (iii) a programme of works; and
  - (iv) any exclusion zones/ environmental micro-siting requirements;
- (b) a marine mammal mitigation protocol in accordance with the outline marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals, following current best practice as advised by the relevant statutory nature conservation body.

(2) The method statement and the marine mammal mitigation protocol must be submitted to the MMO for approval at least six months prior to the date on which it is intended for low order unexploded ordnance clearance activities to begin unless otherwise agreed in writing with the MMO.

(3) Any low order unexploded ordnance clearance activities must be undertaken in accordance with the method statement and marine mammal mitigation protocol approved under sub-paragraph (1).

(4) Subject to sub-paragraph (5), an unexploded ordnance close out report must be submitted to the MMO and the relevant statutory nature conservation body within six months following the end of the low order unexploded ordnance clearance activity and must include the following for each clearance undertaken—

- (a) co-ordinates, depth, current speed, charge utilised and the date and time of each clearance; and

- (b) whether any mitigation was deployed including feedback on practicalities of deployment of equipment and efficacy of the mitigation where reasonably practicable, or justification if this information is not available.
- (5) Should there be more than one low order unexploded ordnance clearance activity, the report required under sub-paragraph (4) will be provided at intervals agreed with the MMO.
- (6) The total number of low order unexploded ordnance clearance as part of the authorised scheme in this licence and the authorised scheme in licence 2 taken together must not exceed 13 (whether undertaken under this licence or licence 2).
- (7) No high order unexploded ordnance clearance is permitted by this marine licence.

### **Marine Noise Registry**

24. —(1) In the event that driven or part-driven pile foundations are proposed to be used as part of the foundation installation the undertaker must provide the following information to the Marine Noise Registry—

- (a) no less than six months prior to the commencement of each stage of construction of the licensed activities, information on the expected location, start and end dates of impact pile driving to satisfy the Marine Noise Registry’s Forward Look requirements;
  - (b) within two weeks after commencement of each stage of construction of the licensed activities, information on the location, start and end dates of impact pile driving to satisfy the Marine Noise Registry’s Forward Look requirements;
  - (c) at six month intervals following the commencement of pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry’s Close Out requirements by 7 April for winter season October – March inclusive and 7 October for summer season April – September inclusive or within 12 weeks of completion of impact pile driving whichever is earlier.
- (2) Within 12 weeks of the completion of pile driving the undertaker must submit information on the locations and dates of those activities to satisfy the Close Out requirements.
- (3) The undertaker must notify MMO of the successful submission of Forward Look or Close Out information pursuant to sub-paragraphs (1) to (3) above within seven days of the submissions to the Marine Noise Registry.
- (4) For the purpose of this condition—
- (a) “Marine Noise Registry” means the database of impulsive noise generating activities in UK seas maintained by Joint Nature Conservation Committee;
  - (b) “Forward Look” and “Close Out” requirements are as set out in the ‘UK Marine Noise Registry: Information Document, Version 1 (May 2016)’ or any updated information document.

### **Offshore safety management**

25. No part of the authorised scheme may commence until the MMO, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that stage of the project, adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN654 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” (or any equivalent guidance that replaces or supersedes it) and its annexes.

### **Reporting of engaged agents, contractors and vessels**

26. —(1) The undertaker must provide the following information in writing to the MMO, unless otherwise agreed in writing by the MMO—

- (a) the name, function, company number (if applicable), registered or head office address (as appropriate) of any agent or contractor appointed to engage in the licensed activities within seven days of appointment; and
- (b) each week during the construction of the authorised scheme a completed Hydrographic Note H102 listing the vessels currently and to be used in relation to the licensed activities.

(2) The undertaker must notify the MMO in writing of any vessel being used to carry on any licensed activity listed in this licence on behalf of the undertaker. Such notification must be received by the MMO no less than 24 hours before the commencement of the licensed activity. Notification must include the master's name, vessel type, vessel IMO number and vessel owner or operating company.

(3) Any changes to the supplied details must be notified to the MMO in writing at least 24 hours before the agent, contractor or vessel engages in the licensed activities.

### **Pre-construction monitoring and surveys**

27.—(1) The undertaker must, in discharging condition 20(1)(c) submit a monitoring plan or plans in accordance with the offshore in principle monitoring plan for written approval by the MMO in consultation with the relevant statutory nature conservation body, which must contain details of proposed monitoring and surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report.

(2) The survey proposals submitted under sub-paragraph (1) must be in general accordance with the principles set out in the offshore in principle monitoring plan and must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position or will enable the validation or otherwise of key predictions in the environmental statement.

(3) The baseline report proposals submitted under sub-paragraph (1) must ensure that the outcome of the agreed surveys, together with existing data and reports, are drawn together to present a valid statement of the pre-construction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.

(4) The pre-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake a swath-bathymetry survey to IHO Order 1a standard that meets the requirements of MGN654 and its supporting Hydrographic Guidelines for Offshore Renewable Energy Developers, which includes the requirement for the full density data and reports to be delivered to the MCA and the UKHO for the update of nautical charts and publications and side scan sonar, of the area(s) within the Order limits in which it is proposed to carry out construction works including an appropriate buffer around the location of each work.

(5) The undertaker must carry out the surveys specified within the monitoring plan or plans in accordance with that plan or plans, unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

### **Construction monitoring**

28.—(1) The undertaker must, in discharging condition 20(1)(c) for each stage of construction, submit details (which accord with the offshore in principle monitoring plan) for approval in writing by the MMO in consultation with the relevant statutory nature conservation bodies of any proposed monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The monitoring proposals must specify each monitoring proposal's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) The construction monitoring must include:

- (a) marine traffic monitoring in accordance with the offshore in principle monitoring plan, including the provision of reports on the results of that monitoring at the end of each year of the construction period to the MMO, MCA and Trinity House;
  - (b) in the event that driven or part-driven pile foundations are proposed, measurements of underwater sound generated by the installation of the first four piled foundations of each piled foundation type to be installed collectively under this licence and licence 2 unless the MMO otherwise agrees in writing; and
  - (c) in the event that driven or part-driven pile foundations are proposed, measurements of underwater sound generated by the installation of the first two piled foundations where it is anticipated hammer energies greater than 3,000kJ may be required for installation, unless the MMO otherwise agrees in writing.
- (3) In the event that piled foundations are proposed to be used, the details submitted in accordance with the marine mammal mitigation protocol must include proposals for monitoring marine mammals.
- (4) The undertaker must carry out the monitoring approved under sub-paragraph (1), including any further underwater sound monitoring required in writing by the MMO, and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.
- (5) The results of the initial underwater sound measurements monitored in accordance with sub-paragraph (2)(b) must be provided to the MMO within six weeks of the installation of the first four piled foundations. The assessment of this report by the MMO will determine whether any further underwater sound monitoring is required. If, in the reasonable opinion of the MMO in consultation with the relevant statutory nature conservation body, the assessment shows significantly different underwater sound modelling results to those assessed in the environmental statement or failures in mitigation, all piling activity must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.
- (6) The results of the any underwater sound measurements monitored in accordance with sub-paragraph (2)(c) must be provided to the MMO within six weeks of the installation of the first two piled foundations that exceed 3,000kJ of hammer energy. The assessment of this report by the MMO will determine whether any further underwater sound monitoring is required. If, in the reasonable opinion of the MMO in consultation with the relevant statutory nature conservation body, the assessment shows significantly different underwater sound modelling results to those assessed in the environmental statement or failures in mitigation, any piling activity where the hammer energy is anticipated to exceed 3,000kJ must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.
- (7) The undertaker must carry out the surveys specified in the offshore monitoring plan in accordance with that plan, including any further underwater sound monitoring required in writing by the MMO under sub-paragraph (4), unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

### **Post-construction monitoring**

29.—(1) The undertaker must, in discharging condition 20(1)(c) submit details (which accord with the offshore in principle monitoring plan) for approval in writing by the MMO in consultation with relevant statutory nature conservation bodies of proposed post-construction monitoring, including methodologies and timings, and a proposed format, content and timings for providing reports on the results.

(2) The monitoring proposals must specify each monitoring proposal's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(3) The post-construction monitoring referred to in sub-paragraph (1) must, unless otherwise agreed in writing with the MMO, have due regard to, but not be limited to, the need to—

- (a) undertake, within 12 months of completion of construction of the authorised scheme, a full sea floor coverage swath-bathymetry survey to IHO Order 1a standard that meets the requirements of MGN 654 and its supporting Hydrographic Guidelines for Offshore Renewable Energy Developers which includes the requirement for the full density data and reports to be delivered to the MCA and the UKHO for the update of nautical charts and publications, and side scan sonar, of the area(s) within the Order limits in which construction works were carried out to assess any changes in bedform topography and such further monitoring or assessment as may be agreed to ensure that cables (including fibre optic cables) have been buried or protected; and
  - (b) undertake post-construction marine traffic monitoring in accordance with the offshore in principle monitoring plan, including the provision of reports on the results of that monitoring to the MMO, MCA and Trinity House.
- (4) The undertaker must carry out the monitoring agreed under sub-paragraph (1) and provide the agreed reports to the MMO in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.
- (5) Following the installation of cables, details of cable monitoring required under 20(1)(d)(i) must be updated with the results of the post installation surveys.

### **Reporting of scour and cable protection**

30.—(1) Not more than four months following completion of the construction of the authorised scheme, the undertaker must provide the MMO and the relevant statutory nature conservation bodies with a report setting out details of the cable protection and scour protection used for the authorised scheme.

(2) The report must include the following information—

- (a) the location of cable protection and scour protection;
- (b) the volume of cable protection and scour protection; and
- (c) any other information relating to the cable protection and scour protection as agreed between the MMO and the undertaker.

(3) Any cable protection (other than the replenishment or replacement of existing cable protection) authorised under this licence must be deployed within 10 years from the date of completion of construction (as reported in the close-out report under condition 31) unless otherwise agreed by the MMO in writing.

### **Completion of construction**

31.—(1) The undertaker must submit a close-out report to the MMO, MCA, Trinity House, the UKHO and the relevant statutory nature conservation body within four months of the date of completion of construction. The close out report must confirm the date of completion of construction and must include the following details—

- (a) the final number of installed wind turbine generators and offshore substation platforms;
- (b) the installed wind turbine generator and offshore substation platform parameters;
- (c) as built plans;
- (d) latitude and longitude coordinates of the centre point of the location for each wind turbine generator and offshore substation platform provided as Geographical Information System data referenced to WGS84 datum; and
- (e) latitude and longitude coordinates of the inter-array and interconnector cables provided as Geographical Information System data referenced to WGS84 datum.

(2) Following completion of construction, no further construction activities can be undertaken under this licence.

## **Requirement for written approval**

32. Where under any of the above conditions the approval or agreement of the MMO is required, that approval or agreement must be given in writing.

## **SCHEDULE 4**

Article 5

### **Deemed Marine Licence under the 2009 Act – Licence 2: Offshore Substation Platforms and Interconnector Cables**

## **PART 1**

### **Licensed marine activities**

## **Interpretation**

1.—(1) In this licence—

“1989 Act” means the Electricity Act 1989(a);

“2004 Act” means the Energy Act 2004(b);

“2008 Act” means the Planning Act 2008(c);

“2009 Act” means the Marine and Coastal Access Act 2009(d);

“Annex I reef” means a reef of a type listed in Annex I to Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora;

“address” includes any number or address used for the purposes of electronic transmission;

“ancillary works” means the ancillary works described in Part 2 of Schedule 1 (ancillary works) and any other works authorised by this Order that are not development within the meaning of section 32 of the 2008 Act;

“authorised deposits” means the substances and articles specified in paragraph 4 of Part 1 of this licence;

“authorised scheme” means Work No.2 and Work No.3 and the further associated development described in paragraph 3 of Part 1 of this licence or any part of that work or development;

“bank holiday” means a bank holiday in England and Wales under section 1 of the Banking and Financial Dealings Act 1971(e);

“buoy” means any floating device used for navigational purposes or measurement purposes, including but not limited to wave buoys, LiDAR and guard buoys;

“cable” means up to 400kV cables for the transmission of electricity and includes fibre optic and other communications cables either within the cable or laid alongside;

“cable crossings” means the crossing of sub-sea cables, pipelines or other existing infrastructure by the cables (including inter-array cables) authorised by this Order together with cable protection;

“cable protection” means measures to protect cables from physical damage including but not limited to concrete mattresses, with or without frond devices, and/or rock placement, the use of bagged solutions filled with grout or other materials;

---

(a) 1989 c.29.  
(b) 2004 c.20.  
(c) 2008 c.29.  
(d) 2009 c.23.  
(e) 1971 c.80.



“chemicals” comprise both substances and preparations;

“commence” means the first carrying out of any licensed activities, save for pre-construction surveys, monitoring surveys, unexploded ordnance surveys and clearance of low order unexploded ordnance, and “commenced” and “commencement” must be construed accordingly;

“commercial operation” means in relation to any part of the authorised scheme, the exporting, transmission or conversion, on a commercial basis, of electricity;

“condition” means a condition in part 2 of this licence;

“electronic transmission” means a communication transmitted—

- (a) by means of an electronic communications network; or
- (b) by other means but while in electronic form;

“environmental statement” means the document certified as the environmental statement by the Secretary of State under article 11 (certification of plans, etc.) of the Order;

“foundation” means any of: a multi-leg pin-piled jacket, multi-leg suction bucket jacket, or gravity base foundation;

“gravity base foundation” means a structure principally of steel, concrete, or steel and concrete with a base which rests on the seabed either due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“HAT” means highest astronomical tide;

“high order unexploded ordnance clearance” means an unexploded ordnance clearance method which intentionally seeks to detonate the unexploded ordnance;

“interconnector cables” means the cables linking the offshore substation platforms to each other;

“intrusive activities” means activities including anchoring of vessels, jacking up of vessels, temporary deposits and temporary wet storage areas;

“jacket foundation” means a steel jacket/lattice-type structure constructed principally of steel, fixed to the seabed with pin-piles or steel suction buckets and associated equipment including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“km” means kilometres;

“LAT” means lowest astronomical tide;

“layout principles” means the layout principles contained within Table 3.7 of the environmental statement project description referred to as document S\_D6\_15 in Schedule 5;

“LiDAR” means a light detection and ranging system used to measure weather and sea conditions;

“licence 1” means the marine licence set out in Schedule 3 (deemed marine licence under the 2009 Act – Licence 1: Wind Turbine Generators and other Offshore Infrastructure);

“licenced activities” means those activities specified in Part 1 of this licence;

“low order unexploded ordnance clearance” means an unexploded ordnance clearance method which does not seek to detonate the unexploded ordnance;

“m” means metres and “m<sup>2</sup>” means metres squared;

“maintain” includes inspect, upkeep, repair, adjust or alter the authorised scheme, and remove, reconstruct or replace any part of the authorised scheme, to the extent assessed in the environmental statement; and any derivative of “maintain” is to be construed accordingly;

“Marine Management Organisation” means the body created under the 2009 Act which is responsible for the regulation of this licence or any successor of that function and “MMO” must be construed accordingly;

“MCA” means the Maritime and Coastguard Agency, the executive agency of the Department for Transport;

“MCMS” means the Marine Case Management System web portal provided and operated by the MMO;

“measures to minimise disturbance to marine mammals and rafting birds from transiting vessels” means the document certified as the measures to minimise disturbance to marine mammals and rafting birds from transiting vessels by the Secretary of State under article 11 (certification of plans, etc.) for the purposes of this Order;

“offshore in principle monitoring plan” means the document certified as the offshore in principle monitoring plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“offshore order limits and grid coordinates plan” means the document certified as the offshore order limits and grid coordinates plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“offshore substation platform” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and open with modular equipment or fully clad, containing—

- (c) electrical equipment required to switch, transform or convert electricity generated at the wind turbine generators to a higher voltage and provide reactive power compensation, including high voltage power transformers, high voltage switchgear and busbars, substation auxiliary systems and low voltage distribution, instrumentation, metering equipment and control systems, standby generators, shunt reactors, auxiliary and uninterruptible power supply systems; and
- (d) accommodation, storage, workshop auxiliary equipment and facilities for operating, maintaining and controlling the substation or wind turbine generators, including navigation, aviation and safety marketing and lighting, systems for vessel charging, access and retrieval, cranes, potable water supply, black water separation, stores, fuels and spares, communications systems and control hub facilities and other associated equipment and facilities;

“offshore surface structures” means offshore substation platforms and wind turbine generators;

“Order” means the Morgan Offshore Wind Project: Generation Assets Order 202[•];

“Order limits” means the limits shown on the offshore order limits and grid coordinates plan within which the authorised scheme may be carried out;

“outline environmental management plan” plan means the document certified as the outline environmental management plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline fisheries liaison and co-existence plan” plan means the document certified as the outline fisheries liaison and co-existence plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline marine mammal mitigation protocol” means the document certified as the outline marine mammal mitigation protocol by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore construction method statement” means the document certified as the outline offshore construction method statement by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore written scheme of investigation for archaeology” plan means the document certified as the outline offshore written scheme of investigation for archaeology by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore operations and maintenance plan” plan means the document certified as the outline offshore operations and maintenance plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline underwater sound management strategy” means the document certified as the outline underwater sound management strategy” by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline vessel traffic management plan” means the document certified as the outline vessel traffic management plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“operation” means the undertaking of activities authorised by this Order which are not part of the construction, commissioning or decommissioning of the authorised development;

“pathway to the marine environment” means open systems or closed systems that require top up;

“pin-piles” means steel or concrete cylindrical piles driven and/or drilled into the seabed to secure jacket foundations;

“preparation” means a mixture or solution composed of two or more substances;

“scour protection” means measures to prevent loss of seabed sediment around any structure placed in or on the seabed including by the use of bagged solutions, filled with grout or other materials, protective aprons, mattresses with or without frond devices and rock and gravel placement;

“substance” means a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition;

“suction bucket foundation” means a tubular steel structure which partially or fully penetrates the seabed and associated equipment, including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“statutory historic body” means an organisation charged by the government with advising on matters related to historic buildings and monuments;

“statutory nature conservation body” means an organisation charged by the government with advising on nature conservation matters;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“UKHO” means the United Kingdom Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

“undertaker” means Morgan Offshore Wind Limited (company registration number: 13497271) whose registered office address is Chertsey Road, Sunbury on Thames, Middlesex, United Kingdom, TW16 7BP;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“works plan” means the plans certified as the works plan by the Secretary of State under Article 11 (certification of plans, etc.) of this Order.

(2) In this licence a reference to any statute, order, regulation or similar instrument is a reference to a statute, order, regulation or instrument as amended by any subsequent statute, order, regulation or instrument or as contained in any subsequent re-enactment.

(3) In this licence, unless otherwise indicated—

(a) all times are Greenwich Mean Time (“GMT”); and

(b) all coordinates are latitude and longitude degrees and minutes to two decimal places.

(4) Unless otherwise stated or agreed with the MMO, all notifications must be sent by the undertaker to the MMO using MCMS. Except where otherwise notified in writing by the relevant organisation, the addresses for correspondence for the purposes of this Schedule are—

- (a) Centre for Environment, Fisheries and Aquaculture Science  
Pakefield Road  
Lowestoft  
Suffolk  
NR33 0HT  
Tel: 01502 562 244
- (b) Historic England  
4th Floor  
Cannon Bridge House  
25 Dowgate Hill  
London  
EC4R 2YA Tel: 0161 421 416  
Email: [northwest@historicengland.org.uk](mailto:northwest@historicengland.org.uk)
- (c) Marine Management Organisation  
Marine Licensing Team  
Lancaster House  
Hampshire Court  
Newcastle upon Tyne  
NE4 7YH  
Tel: 0300 231 1032  
Email: [marine.consents@marinemangement.org.uk](mailto:marine.consents@marinemangement.org.uk)
- (d) Marine Management Organisation (local office)  
Lutra House  
Dodd Way  
Walton Summit  
Preston  
PR5 8BX  
Tel: 02080 265 643  
Email: [preston@marinemangement.org.uk](mailto:preston@marinemangement.org.uk)
- (e) Marine Management Organisation  
Marine Pollution Response Team  
Tel. (during office hours): 03008 002 024,  
Tel. (outside office hours): 07770 977 825 or 0845 051 8486
- (f) Maritime and Coastguard Agency  
UK Technical Services Navigation Spring Place  
105 Commercial Road  
Southampton  
SO15 1EG  
Email: [navigationsafety@mcga.gov.uk](mailto:navigationsafety@mcga.gov.uk)
- (g) Natural England  
Foss House  
Kings Pool  
1-2 Peasholme Green

York  
YO1 7PX  
Tel: 03000 604 911

(h) Trinity House

Tower Hill

London

EC3N 4DH

Tel: 020 7481 6900

(i) United Kingdom Hydrographic Office

Admiralty Way

Taunton

Somerset

TA1 2DN

Tel: 01823 337 900

### Details of licensed marine activities

2. Subject to the conditions, this licence authorises the undertaker (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities under section 66(1) (licensable marine activities) of the 2009 Act—

- (a) the deposit at sea of the substances and objects specified in paragraph 4 below;
- (b) the construction of works in or over the sea or on or under the seabed;
- (c) dredging for the purposes of seabed preparation for foundation works or cable works;
- (d) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;
- (e) site clearance and preparation works including clearance of debris, boulder clearance and the removal of out of service cables and static fishing equipment;
- (f) low order unexploded ordnance clearance;
- (g) the use of extracted seabed material within gravity base foundations; and
- (h) the disposal of up to 1,253,915 cubic metres of inert material of natural origin within the Order limits produced during construction drilling or seabed preparation for foundation works, cable works and boulder clearance works at disposal site reference IS155 within the extent of the Order limits seaward of MHWS, unless otherwise agreed in writing with the MMO.

3. Such activities are authorised in relation to the construction, maintenance and operation of the authorised scheme being—

*Work No. 2*—up to four offshore substation platforms (all or any of which may alternatively be constructed under licence 1); and

*Work No.3*—a network of subsea interconnector cables between the offshore substation platforms including cable crossings and cable protection (which may alternatively be constructed under licence 1).

In connection with the licenced activities in Work Nos. 2 and 3 and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised scheme and which fall within the scope of the work assessed by the environmental statement, including—

- (a) scour protection around the foundations of the offshore structures;

- (b) cable protection measures such as rock placement and the placement of rock and/or concrete mattresses, with or without frond devices;
- (c) dredging;
- (d) the removal of material from the seabed and the disposal of inert material of natural origin and/or dredged material within the Order limits produced during construction drilling and seabed preparation for foundation works, cable installation preparation such as sandwave clearance, boulder clearance and pre-trenching; and
- (e) creation and use of temporary vessel laydown areas and use of cable anchors;
- (f) temporary landing places, moorings or other means of accommodating vessels in the construction or maintenance of the authorised scheme;
- (g) removal of static fishing equipment;
- (h) the use of extracted seabed material within gravity base foundations;
- (i) lighting; and
- (j) buoys, beacons, fenders and other navigational warning or ship impact protection works.

4. The substances and objects authorised for deposit at sea are—

- (a) iron, steel, copper and aluminium;
- (b) stone and rock;
- (c) concrete and grout;
- (d) sand and gravel;
- (e) plastic and synthetic;
- (f) material extracted from within the Order limits during construction drilling or seabed preparation for foundation works and cable sandwave preparation works; and
- (g) marine coatings, other chemicals and timber.

5. The grid coordinates for Work No.2 and Work No.3 are as shown on the order limits and grid coordinates plan and as specified below—

| <i>Point</i> | <i>Latitude</i>   | <i>Longitude</i> |
|--------------|-------------------|------------------|
| 1            | 53° 54' 27.788" N | 3° 58' 8.915" W  |
| 2            | 53° 54' 41.257" N | 3° 58' 42.184" W |
| 3            | 53° 57' 6.032" N  | 4° 3' 55.525" W  |
| 4            | 53° 57' 7.936" N  | 4° 4' 25.017" W  |
| 5            | 53° 57' 13.636" N | 4° 5' 53.497" W  |
| 6            | 53° 58' 7.549" N  | 4° 7' 48.094" W  |
| 7            | 54° 0' 28.539" N  | 4° 12' 48.480" W |
| 8            | 54° 0' 33.128" N  | 4° 12' 41.699" W |
| 9            | 54° 0' 39.541" N  | 4° 12' 32.331" W |
| 10           | 54° 0' 49.220" N  | 4° 12' 18.682" W |
| 11           | 54° 0' 58.979" N  | 4° 12' 5.399" W  |
| 12           | 54° 1' 0.852" N   | 4° 12' 2.795" W  |
| 13           | 54° 1' 10.663" N  | 4° 11' 49.441" W |
| 14           | 54° 1' 20.488" N  | 4° 11' 36.537" W |
| 15           | 54° 1' 26.187" N  | 4° 11' 24.779" W |
| 16           | 54° 1' 31.886" N  | 4° 11' 13.315" W |
| 17           | 54° 1' 33.367" N  | 4° 11' 10.387" W |
| 18           | 54° 1' 34.438" N  | 4° 11' 8.270" W  |
| 19           | 54° 1' 39.125" N  | 4° 10' 59.214" W |
| 20           | 54° 1' 41.978" N  | 4° 10' 53.701" W |
| 21           | 54° 1' 42.739" N  | 4° 10' 52.231" W |



|    |                  |                  |
|----|------------------|------------------|
| 22 | 54° 1' 47.148" N | 4° 10' 43.936" W |
| 23 | 54° 1' 48.940" N | 4° 10' 40.404" W |
| 24 | 54° 1' 57.247" N | 4° 10' 24.352" W |
| 25 | 54° 2' 5.706" N  | 4° 10' 8.569" W  |
| 26 | 54° 2' 11.564" N | 4° 9' 57.954" W  |
| 27 | 54° 2' 14.425" N | 4° 9' 52.857" W  |
| 28 | 54° 2' 14.433" N | 4° 9' 52.843" W  |
| 29 | 54° 2' 14.446" N | 4° 9' 52.820" W  |
| 30 | 54° 2' 23.202" N | 4° 9' 37.580" W  |
| 31 | 54° 2' 23.221" N | 4° 9' 37.547" W  |
| 32 | 54° 2' 23.229" N | 4° 9' 37.534" W  |
| 33 | 54° 2' 23.238" N | 4° 9' 37.518" W  |
| 34 | 54° 2' 23.239" N | 4° 9' 37.517" W  |
| 35 | 54° 2' 32.133" N | 4° 9' 22.564" W  |
| 36 | 54° 2' 32.146" N | 4° 9' 22.542" W  |
| 37 | 54° 2' 32.159" N | 4° 9' 22.521" W  |
| 38 | 54° 2' 32.166" N | 4° 9' 22.509" W  |
| 39 | 54° 2' 32.172" N | 4° 9' 22.500" W  |
| 40 | 54° 2' 41.223" N | 4° 9' 7.804" W   |
| 41 | 54° 2' 41.236" N | 4° 9' 7.782" W   |
| 42 | 54° 2' 41.249" N | 4° 9' 7.761" W   |
| 43 | 54° 2' 41.257" N | 4° 9' 7.749" W   |
| 44 | 54° 2' 41.263" N | 4° 9' 7.739" W   |
| 45 | 54° 2' 50.489" N | 4° 8' 53.271" W  |
| 46 | 54° 2' 59.863" N | 4° 8' 39.076" W  |
| 47 | 54° 3' 9.407" N  | 4° 8' 25.119" W  |
| 48 | 54° 3' 19.079" N | 4° 8' 11.466" W  |
| 49 | 54° 3' 28.890" N | 4° 7' 58.099" W  |
| 50 | 54° 3' 38.836" N | 4° 7' 45.024" W  |
| 51 | 54° 3' 48.923" N | 4° 7' 32.234" W  |
| 52 | 54° 3' 52.208" N | 4° 7' 28.172" W  |
| 53 | 54° 3' 56.043" N | 4° 7' 23.528" W  |
| 54 | 54° 3' 59.107" N | 4° 7' 19.782" W  |
| 55 | 54° 3' 59.122" N | 4° 7' 19.764" W  |
| 56 | 54° 3' 59.130" N | 4° 7' 19.754" W  |
| 57 | 54° 4' 1.160" N  | 4° 7' 17.353" W  |
| 58 | 54° 4' 1.181" N  | 4° 7' 17.328" W  |
| 59 | 54° 4' 6.734" N  | 4° 7' 10.779" W  |
| 60 | 54° 4' 7.781" N  | 4° 7' 9.560" W   |
| 61 | 54° 4' 9.456" N  | 4° 7' 7.587" W   |
| 62 | 54° 4' 13.935" N | 4° 7' 2.501" W   |
| 63 | 54° 4' 16.028" N | 4° 7' 0.112" W   |
| 64 | 54° 4' 18.943" N | 4° 6' 56.806" W  |
| 65 | 54° 4' 19.913" N | 4° 6' 55.716" W  |
| 66 | 54° 4' 24.700" N | 4° 6' 50.475" W  |
| 67 | 54° 4' 30.489" N | 4° 6' 44.156" W  |
| 68 | 54° 4' 35.097" N | 4° 6' 39.269" W  |
| 69 | 54° 4' 40.000" N | 4° 6' 34.145" W  |
| 70 | 54° 4' 41.189" N | 4° 6' 32.904" W  |
| 71 | 54° 4' 45.972" N | 4° 6' 28.021" W  |

|    |                   |                  |
|----|-------------------|------------------|
| 72 | 54° 3' 42.182" N  | 4° 0' 24.131" W  |
| 73 | 54° 0' 25.772" N  | 3° 53' 55.337" W |
| 74 | 53° 58' 34.172" N | 3° 47' 19.232" W |
| 75 | 53° 56' 34.760" N | 3° 47' 14.121" W |

6. This marine licence remains in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 (approval of decommissioning programmes) of the 2004 Act including any modification to the programme under section 108 (reviews and revisions of decommissioning programmes) of the 2004 Act, and the completion of such programme has been confirmed by the Secretary of State in writing.

7. The provisions of section 72 (variation, suspension, revocation and transfer) of the 2009 Act apply to this licence except that the provisions of section 72(7) and (8) relating to the transfer of the licence apply only to a transfer not falling within article 7 (benefit of order) of the Order.

8. With respect to any condition which requires the licensed activities be carried out in accordance with the details, plans or schemes approved under this licence, the approved details, plans or schemes are taken to include any amendments that may subsequently be approved in writing by the MMO.

9. Any amendments to or variations from the approved details, plans or schemes must be in accordance with the principles and assessments set out in the environmental statements. Such agreement may only be given where it has been demonstrated to the satisfaction of the MMO that it is unlikely to or will not give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

## PART 2

### Conditions

#### Design parameters

10. —(1) The authorised scheme must be constructed in accordance with the parameters assessed in the environmental statement and set out in Table 3.

(2) References to the location of an offshore surface structure in Table 3 is a reference to the centre point of that structure.

**Table 3**

| <i>Parameter</i>                                                                                                       | <i>Value</i> |
|------------------------------------------------------------------------------------------------------------------------|--------------|
| Minimum distance between offshore surface structures (in all directions) (m)                                           | 1,400        |
| Maximum diameter of pin-piles for offshore substation platforms on jacket pin-pile foundations (m)                     | 5.5          |
| Maximum diameter of gravity base at the seabed for offshore substation platforms on gravity base foundations (m)       | 80           |
| Maximum diameter of buckets for offshore substation platforms on suction bucket jackets (m)                            | 18           |
| Maximum number of offshore substation platforms                                                                        | 4            |
| Maximum dimensions of offshore substations (excluding towers, helipads, masts, and cranes):                            |              |
| Height when measured from LAT (m)                                                                                      | 70           |
| Length (m)                                                                                                             | 80           |
| Width (m)                                                                                                              | 60           |
| Maximum total seabed footprint area for offshore substation foundations (including scour protection) (m <sup>2</sup> ) | 24,964       |

|                                                                                             |         |
|---------------------------------------------------------------------------------------------|---------|
| Maximum volume of scour protection for offshore substation foundations (m <sup>3</sup> )    | 58,361  |
| Maximum total length of cables (interconnector) (km)                                        | 60      |
| Maximum number of cable crossings (interconnector)                                          | 10      |
| Maximum volume of cable protection (interconnector) (m <sup>3</sup> )                       | 210,000 |
| Maximum total seabed footprint area for cable protection (interconnector) (m <sup>2</sup> ) | 130,000 |

11. The total number of offshore substation platforms forming part of the authorised scheme in this licence and the authorised scheme in licence 1 taken together must not exceed four (whether constructed under this licence or licence 1).

12. The total length of interconnector cables forming part of the authorised scheme in this licence and the authorised scheme in licence 1 taken together must not exceed 60 kilometres (whether constructed under this licence or licence 1).

### **Maintenance of the authorised scheme**

13.—(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.

(2) Maintenance works include but are not limited to—

- (a) offshore substation platform replacement;
- (b) painting and applying other coatings to or offshore substation platforms;
- (c) bird waste and marine growth removal;
- (d) cable remedial burial;
- (e) cable repairs and replacement;
- (f) access ladder and boat landing replacement;
- (g) offshore substation platform anode replacement; and
- (h) J-tube repair/replacement.

(3) An operations and maintenance plan in accordance with the outline offshore operations and maintenance plan must be submitted to the MMO for approval in writing at least six months prior to commencement of the operation of licensed activities and must provide for review and resubmission every three years during the operational phase.

(4) All operation and maintenance activities must be carried out in accordance with the plan approved under sub-paragraph (3).

(5) An annual maintenance report must be submitted to the MMO in writing within one month following the first anniversary of the date of commencement of operations, and every year thereafter until the permanent cessation of operation.

(6) The annual maintenance report in sub-paragraph (5) must provide a record of the licenced activities during the preceding year, the timing of activities and methodologies used.

(7) Unless otherwise agreed in writing with the MMO, every fifth year the undertaker must submit to the MMO in writing, within one month of that date, a consolidated maintenance report which will—

- (a) Include a review of licenced activities undertaken during the preceding five years with reference to the reports submitted in accordance with sub-paragraph (5) of this licence; and
- (b) Reconfirm the applicability of the methodologies and frequencies of the licensable activities permitted by this licence for the remaining duration of this licence.

## **Extension of time periods**

14. Any time period given in this licence to either the undertaker or the MMO may be extended with the agreement of the other party such agreement not to be unreasonably withheld or delayed.

## **Notifications and inspections**

15. —(1) The undertaker must ensure that—

- (a) a copy of this licence (issued as part of the grant of the Order) and any subsequent amendments or revisions to it is provided to—
  - (i) all agents and contractors notified to the MMO in accordance with condition 26;
  - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 26;
- (b) within 28 days of receipt of a copy of this licence those persons referred to in paragraph (a) must confirm receipt of this licence in writing to the MMO.

(2) Only those persons and vessels notified to the MMO in accordance with condition 26 are permitted to carry out the licensed activities.

(3) Copies of this licence must also be available for inspection at the following locations—

- (a) the undertaker's registered address;
- (b) any site office located at or adjacent to the construction site and used by the undertaker or its agents and contractors responsible for the loading, transportation or deposit of the authorised deposits; and
- (c) on board each vessel and at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.

(4) The documents referred to in sub-paragraph (1)(a) must be available for inspection by an authorised enforcement officer at the locations set out in sub-paragraph (3)(b).

(5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during the construction and operation of the authorised scheme.

(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 and within five days of the completion of the licensed activity.

(7) The Kingfisher Information Service of Seafish must be informed of details of the vessel routes, timings and locations relating to the construction of the authorised scheme or part thereof by including the information in a notice via their portal (<https://kingfisherbulletin.org/submit-notice>) and by email to [kingfisher@seafish.co.uk](mailto:kingfisher@seafish.co.uk) —

- (a) at least 14 days prior to the commencement of offshore activities, for inclusion in the Kingfisher Fortnightly Bulletin and offshore hazard awareness data; and
- (b) as soon as reasonably practicable and no later than 24 hours after completion of the authorised scheme

and confirmation of notification must be provided to the MMO within five days.

(8) The undertaker must ensure that a local notification to mariners is issued at least 14 days prior to the commencement of the authorised scheme or any part thereof advising of the start date and the expected vessel routes from the construction ports to the relevant location. Copies of all notices must be provided to the MMO, MCA Trinity House and UKHO within five days.

(9) The undertaker must ensure that local notifications to mariners are updated and reissued at weekly intervals during construction activities and at least five days before any planned operations and maintenance works (or otherwise agreed) and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction programme and monitoring plan approved under conditions 20(1)(b)) and 20(1)(c). Copies of all notices must be provided to the MMO and UKHO within five days.

(10) The undertaker must notify UKHO of completion (within 14 days) of the authorised scheme or any part thereof in order that all necessary amendments are made to nautical charts. Copies of all notices must be provided to the MMO and MCA within five days.

(11) In case of damage to, or destruction or decay of, the authorised scheme or any part thereof, excluding the exposure of cables and faults, the undertaker must as soon as reasonably practicable and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify the MMO, MCA, Trinity House, the Kingfisher Information Service of Seafish, regional fisheries contact and UKHO.

(12) In case of buried cables becoming exposed on or above the seabed, the undertaker must within three days following identification of a cable exposure, notify mariners regional fisheries contact and the Kingfisher Information Service of Seafish of the location and extent of exposure. Copies of all notices must be provided to the MMO, MCA, Trinity House, and UKHO within five days.

(13) The undertaker must ensure that the MMO, the MMO Local Office, local fishermen's organisations, and the Source Data Receipt Team at the UKHO Taunton, Somerset, TA1 2DN (sdr@ukho.gov.uk) are notified within five days of each instance of cable repair, replacement or protection replenishment activity.

### **Aids to navigation**

16.—(1) The undertaker must during the period from commencement of construction of the authorised scheme to completion of decommissioning exhibit such lights, marks, sounds, signals and other aids to navigation, and take such other steps for the prevention of danger to navigation, as Trinity House may from time to time direct.

(2) The undertaker must during the period from commencement of construction of the authorised scheme to completion of decommissioning keep Trinity House and the MMO informed of progress of the authorised scheme including—

- (a) notice of commencement of construction of the authorised scheme within 24 hours of commencement having occurred;
- (b) notice within 24 hours of any aids to navigation being established by the undertaker; and
- (c) notice within five days of completion of construction of the authorised scheme.

(3) The undertaker must provide reports to Trinity House on the availability of aids to navigation in accordance with the frequencies set out in the aids to navigation management plan agreed pursuant to condition 20(1)(f) using the reporting system provided by Trinity House.

(4) The undertaker must during the period from commencement of construction of the authorised scheme to completion of decommissioning notify Trinity House and the MMO of any failure of the aids to navigation and the timescales and plans for remedying such failures, as soon as possible and no later than 24 hours following the undertaker becoming aware of any such failure.

(5) In the event that the provisions of condition 15(11) are invoked, the undertaker must lay down such buoys, exhibit such lights and take such other steps for preventing danger to navigation as directed by Trinity House.

### **Colouring of structures**

17. Except as otherwise required by Trinity House the undertaker must paint all structures forming part of the authorised scheme yellow (colour code RAL 1023) from at least HAT to a height as directed by Trinity House. Unless the MMO otherwise directs, the undertaker must paint the remainder of the structures grey (colour code RAL 7035).

## **Chemicals, drilling and debris**

18.—(1) The undertaker must ensure that any coatings and treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by the Health and Safety Executive and the Environment Agency Pollution Prevention Control Guidelines.

(2) The storage, handling, transport and use of fuels, lubricants, chemicals and other substances must be undertaken so as to prevent releases into the marine environment, including bunding of 110 percent of the total volume of all reservoirs and containers.

(3) The undertaker must inform the MMO in writing of the location and quantities of material disposed of each month under this licence by submission of a disposal return by 15 February each year for the months August to January inclusive, and by 15 August each year for the months February to July inclusive.

(4) 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 disposal site reference IS155 within the extent of the Order limits seaward of MHWS. Any other materials must be screened out before disposal of the inert material at this site.

(5) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source, free from contaminants and containing minimal fines.

(6) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost within the Order limits, the undertaker must report the loss in writing to the local enforcement office within 48 hours and if the MMO reasonably considers such material to constitute a navigation or environmental hazard (dependent on the size and nature of the material) the undertaker must, in that event, demonstrate to the MMO that reasonable attempts have been made to locate, remove or move any such material.

(7) The undertaker must ensure that no waste concrete slurry or wash water from concrete or cement works are discharged into the marine environment. Concrete and cement mixing and washing areas must be contained to prevent run off entering the water through the freeing ports.

(8) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO Marine Pollution Response Team in accordance with the marine pollution contingency plan agreed under condition 20(1)(e).

(9) Debris or dropped objects which are considered a danger or hazard to navigation must be reported as soon as reasonably practicable but no later than six hours from the undertaker becoming aware of an incident, to the relevant HM Coastguard Maritime Rescue Co-ordination Centre by telephone (0344 382 0570), and the UK Hydrographic Office email: [navwarnings@btconnect.com](mailto:navwarnings@btconnect.com).

(10) All dropped objects including those in condition 18(9), must be reported to the MMO using the dropped object procedure form (including any updated form as provided by the MMO) as soon as reasonably practicable and in any event within 24 hours of the undertaker becoming aware of an incident, unless otherwise agreed in writing with the MMO.

(11) On receipt of notification of the dropped object procedure form the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the marine environment at the undertaker's expense if reasonable to do so.

## **Force Majeure**

19.—(1) If due to stress of weather or any other cause beyond the reasonable control of the master of a vessel, and which the master of a vessel by the exercise of reasonable diligence is unable to prevent, avoid or remove, the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life or of the vessel is threatened, within 48 hours the undertaker must notify full details of the circumstances of the deposit to the MMO.

(2) The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.



## **Pre-construction plans and documentation**

20.—(1) The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by the MMO, in consultation with Trinity House, the MCA and UKHO as appropriate—

- (a) a design plan at a scale of between 1:25,000 and 1:50,000 in accordance with the layout principles, including detailed representation on the most suitably scaled admiralty chart, to be approved in writing by the MMO in consultation with Trinity House and the MCA setting out proposed details of the authorised scheme, including the:
  - (i) number, dimensions, specification, foundation type(s) and depth for each substation platform;
  - (ii) the proposed layout of all offshore substation platforms, including grid coordinates of the centre point of the proposed location for each offshore substation platform subject to up to 55m micro-siting in any direction unless otherwise agreed in writing with the MMO in consultation with the MCA and Trinity House;
  - (iii) proposed layout of all cables;
  - (iv) location and specification of all other aspects of the authorised scheme; and
  - (v) any archaeological exclusion zones or micro-siting requirements identified pursuant to condition 20(2)(d) or relating to any benthic habitats of conservation, ecological or economic importance constituting reef habitats of principal importance as listed under Section 41 of the Natural Environment and Rural Communities Act 2006,to ensure conformity with the description of Work Nos 2 and 3 and compliance with conditions 10, 11 and 12.
- (b) a construction programme to include details of—
  - (i) the proposed construction start date;
  - (ii) proposed timings for mobilisation of plant delivery of materials and installation works;
  - (iii) an indicative written construction programme for all offshore substation platforms forming part of the authorised scheme and licenced activities;
- (c) a monitoring plan (which accords with the offshore in principle monitoring plan) to include details of proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction monitoring and related reporting in accordance with conditions 27, 28 and 29 to be submitted to the MMO in accordance with the following:-
  - (i) at least six months prior to the first survey, detail of the pre-construction surveys and an outline of all proposed monitoring;
  - (ii) at least six months prior to commencement of construction, detail on construction monitoring;
  - (iii) at least six months prior to completion of construction, details of operational monitoring, if required; andunless otherwise agreed in writing with the MMO.
- (d) an offshore construction method statement (which accords with the outline offshore construction method statement) in accordance with the construction methods assessed in the environmental statement, including details of—
  - (i) cable specification, installation and monitoring, to include—
    - (aa) the technical specification of the interconnector cables;
    - (bb) a detailed cable specification and installation plan for the authorised scheme, incorporating a cable burial risk assessment. The detailed cable specification and installation plan will identify the risk of needing any cable protection that may exceed 5 percent of navigable depth referenced to Chart Datum. In the

- event that any area of cable protection exceeding 5 percent of navigable depth is identified, the cable specification and installation plan will set out details of any steps (to be determined following consultation with the MCA and Trinity House) to be taken to ensure existing and future safe navigation is not compromised; and
- (cc) details of cable monitoring including details of cable protection until the authorised scheme is decommissioned which includes a risk based approach to the management of unburied or shallow buried cables;
  - (ii) scour protection management and cable protection management including details of the need, type, sources, quantity and installation methods for scour protection and cable protection, with details updated and resubmitted for approval if changes to it are proposed following cable laying operations;
  - (iii) foundation installation methodology, including drilling methods and disposal of drill arisings and material extracted during seabed preparation for foundation and cable installation works;
  - (iv) piling methodology, in the event that driven or part-driven pile foundations are proposed to be used;
  - (v) contractors;
  - (vi) associated ancillary works; and
  - (vii) guard vessels to be employed;
- (e) an offshore environmental management plan (which accords with the outline environment management plan) to include details of—
- (i) a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents during construction and operation of the authorised scheme in relation to all activities carried out;
  - (ii) a chemical risk assessment, including information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance and standards;
  - (iii) a chemical risk assessment for all chemicals that have a pathway to the marine environment used for the marine licensed activities, outside the course of normal navigation, and are not present on the OSPAR List of Substances Used and Discharged Offshore which Are Considered to Pose Little or No Risk to the Environment (PLONOR) to be submitted to the MMO for approval no later than ten weeks prior to use of the chemicals and to include details of —
  - (iv) (aa) the function of the chemical;
  - (v) (bb) the quantities being used and the frequency of use;
  - (vi) (cc) the physical, chemical, and ecotoxicological properties;
  - (vii) waste management and disposal arrangements;
  - (viii) the appointment and responsibilities of a fisheries liaison officer;
  - (ix) a fisheries liaison and coexistence plan (which accords with the outline fisheries liaison and co-existence plan) to ensure relevant fishing fleets are notified of commencement of licensed activities pursuant to condition 15 and to address the interaction of the licensed activities with fishing activities;
  - (x) measures to minimise disturbance to marine mammals and rafting birds from transiting vessels; and
  - (xi) measures to minimise the potential spread of invasive non-native species.
- (f) an aids to navigation management plan to be agreed in writing by the MMO following consultation with Trinity House specifying how the undertaker will ensure compliance with condition 16 from the commencement of construction of the authorised scheme to the completion of decommissioning of the authorised scheme;

- (g) in the event that driven or part-driven pile foundations are proposed to be used a marine mammal mitigation protocol (in accordance with the outline marine mammal mitigation protocol), the intention of which is to prevent injury to marine mammals, following current best practice as advised by the relevant statutory nature conservation body; and
- (h) a vessel traffic management plan (in accordance with the outline vessel traffic management plan).

(2) The authorised scheme must not commence until a written scheme of archaeological investigation has been submitted to and approved by the MMO following consultation with the statutory historic body, in accordance with the outline offshore written scheme of investigation, and in accordance with industry good practice, following consultation with the statutory historic body to include—

- (a) details of responsibilities of the undertaker, archaeological consultant and contractor;
- (b) a methodology for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
- (c) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO within four months of any survey being completed;
- (d) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;
- (e) monitoring of archaeological exclusion zones during and post construction where required;
- (f) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting an OASIS (Online Access to the Index of archaeological investigations) form with a digital copy of the report within six months of completion of construction of the authorised scheme, and to notify the MMO that the OASIS form has been submitted to the National Record of the Historic Environment within two weeks of submission;
- (g) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme; and
- (h) a timetable for all further site investigations, which must allow sufficient opportunity to establish a full understanding of the historic environment within the Order limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licensed activities;

(3) Pre-commencement surveys and archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific written scheme of investigation (which must accord with the details set out in the outline offshore written scheme of investigation) which has been submitted to and approved by the MMO.

21.—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 20 must be submitted for approval at least six months before the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(2) The licensed activities must be carried out in accordance with the plans, protocols, statements, schemes and details approved under condition 20, unless otherwise agreed in writing by MMO.

### **Underwater Sound Management Strategy**

22.—(1) No driven or part-driven piling activities shall commence or low order UXO clearance can take place until an underwater sound management strategy for those activities, which accords with the outline underwater sound management strategy, has been submitted to, and approved in writing, by the MMO in consultation with the relevant statutory nature conservation body.

(2) The underwater sound management strategy submitted under sub-paragraph (1) must include details of the noise mitigation systems and/or noise abatement system that will be utilised to

manage sound from driven or part-driven piling activities (or low order UXO clearance unless otherwise agreed in writing by the MMO).

(3) No driven or part-driven piling activities or low order UXO clearance may be undertaken between 15 February to 31 March (inclusive) of any year, unless the MMO provides written confirmation to the undertaker beforehand that such works can take place in all or in a specified part of the Order limits during this period or part of this period.

(4) In considering whether to provide the confirmation referred to in sub-paragraph (3) above, the MMO shall have regard to any report or reports provided to the MMO by or on behalf of the undertaker relating to such matters as additional baseline information, reduced spatial restrictions, piling management measures, installation techniques or noise propagation modelling.

(5) The underwater sound management strategy must be submitted to the MMO no later than six months prior to the commencement of the relevant activities unless otherwise agreed in writing by the MMO.

(6) The driven or part-driven piling activities and low order UXO clearance must be carried out in accordance with the approved underwater sound management strategy, unless otherwise agreed in writing by the MMO.

### **Low order unexploded ordnance clearance**

**23.**—(1) No low order unexploded ordnance clearance can take place until the following have been submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body and, in respect of the method statement, the MCA—

- (a) a method statement for low order unexploded ordnance clearance which must include—
  - (i) methodologies for—
    - (aa) identification and investigation of potential unexploded ordnance targets;
    - (bb) low order unexploded ordnance clearance; and
    - (cc) removal and disposal of large debris;
  - (ii) a plan showing the area in which clearance activities are proposed to take place;
  - (iii) a programme of works; and
  - (iv) any exclusion zones/ environmental micro-siting requirements;
- (b) a marine mammal mitigation protocol in accordance with the outline marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals, following current best practice as advised by the relevant statutory nature conservation body.

(2) The method statement and the marine mammal mitigation protocol must be submitted to the MMO for approval at least six months prior to the date on which it is intended for low order unexploded ordnance clearance activities to begin unless otherwise agreed in writing with the MMO.

(3) Any low order unexploded ordnance clearance activities must be undertaken in accordance with the method statement and marine mammal mitigation protocol approved under sub-paragraph (1).

(4) Subject to sub-paragraph (5), an unexploded ordnance close out report must be submitted to the MMO and the relevant statutory nature conservation body within six months following the end of the low order unexploded ordnance clearance activity and must include the following for each clearance undertaken—

- (a) co-ordinates, depth, current speed, charge utilised and the date and time of each clearance; and
- (b) whether any mitigation was deployed including feedback on practicalities of deployment of equipment and efficacy of the mitigation where reasonably practicable, or justification if this information is not available.

(5) Should there be more than one low order unexploded ordnance clearance activity, the report required under sub-paragraph (4) will be provided at intervals agreed with the MMO.

(6) The total number of low order unexploded ordnance clearance as part of the authorised scheme in this licence and the authorised scheme in licence 1 taken together must not exceed 13 (whether undertaken under this licence or licence 1).

(7) No high order unexploded ordnance clearance is permitted by this marine licence.

### **Marine Noise Registry**

24.—(1) In the event that driven or part-driven pile foundations are proposed to be used as part of the foundation installation the undertaker must provide the following information to the Marine Noise Registry—

- (a) no less than six months prior to the commencement of each stage of construction of the licensed activities, information on the expected location, start and end dates of impact pile driving to satisfy the Marine Noise Registry's Forward Look requirements,
- (b) within two weeks after commencement of each stage of construction of the licensed activities, information on the location, start and end dates of impact pile driving to satisfy the Marine Noise Registry's Forward Look requirements;
- (c) at six month intervals following the commencement of pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry's Close Out requirements by 7 April for winter season October – March inclusive and 7 October for summer season April – September inclusive or within 12 weeks of completion of impact pile driving whichever is earlier.

(2) Within 12 weeks of the completion of pile driving the undertaker must submit information on the locations and dates of those activities to satisfy the Close Out requirements.

(3) The undertaker must notify MMO of the successful submission of Forward Look or Close Out information pursuant to sub-paragraphs (1) to (3) above within seven days of the submissions to the Marine Noise Registry.

(4) For the purpose of this condition—

- (a) “Marine Noise Registry” means the database of impulsive noise generating activities in UK seas maintained by Joint Nature Conservation Committee;
- (b) “Forward Look” and “Close Out” requirements are as set out in the ‘UK Marine Noise Registry: Information Document, Version 1 (May 2016)’ or any updated information document.

### **Offshore safety management**

25. No part of the authorised scheme may commence until the MMO, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that stage of the project, adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN654 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” (or any equivalent guidance that replaces or supersedes it) and its annexes.

### **Reporting of engaged agents, contractors and vessels**

26.—(1) The undertaker must provide the following information in writing to the MMO, unless otherwise agreed in writing by the MMO—

- (a) the name, function, company number (if applicable), registered or head office address (as appropriate) of any agent or contractor appointed to engage in the licensed activities within seven days of appointment; and
- (b) each week during the construction of the authorised scheme a completed Hydrographic Note H102 listing the vessels currently and to be used in relation to the licensed activities.

(2) The undertaker must notify the MMO in writing of any vessel being used to carry on any licensed activity listed in this licence on behalf of the undertaker. Such notification must be received by the MMO no less than 24 hours before the commencement of the licensed activity. Notification must include the master's name, vessel type, vessel IMO number and vessel owner or operating company

(3) Any changes to the supplied details must be notified to the MMO in writing at least 24 hours before the agent, contractor or vessel engages in the licensed activities.

### **Pre-construction monitoring and surveys**

27.—(1) The undertaker must, in discharging condition 20(1)(c) submit a monitoring plan or plans in accordance with the offshore in principle monitoring plan for written approval by the MMO in consultation with the relevant statutory nature conservation body, which must contain details of proposed monitoring and surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report.

(2) The survey proposals submitted under sub-paragraph (1) must be in general accordance with the principles set out in the offshore in principle monitoring plan and must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position or will enable the validation or otherwise of key predictions in the environmental statement.

(3) The baseline report proposals submitted under sub-paragraph (1) must ensure that the outcome of the agreed surveys, together with existing data and reports, are drawn together to present a valid statement of the pre-construction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.

(4) The pre-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake a swath-bathymetry survey to IHO Order 1a standard that meets the requirements of MGN654 and its supporting Hydrographic Guidelines for Offshore Renewable Energy Developers, which includes the requirement for the full density data and reports to be delivered to the MCA and the UKHO for the update of nautical charts and publications and side scan sonar, of the area(s) within the Order limits in which it is proposed to carry out construction works including an appropriate buffer around the location of each work.

(5) The undertaker must carry out the surveys specified within the monitoring plan or plans in accordance with that plan or plans, unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

### **Construction monitoring**

28.—(1) The undertaker must, in discharging condition 20(1)(c) for each stage of construction, submit details (which accord with the offshore in principle monitoring plan) for approval in writing by the MMO in consultation with the relevant statutory nature conservation bodies of any proposed monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The monitoring proposals must specify each monitoring proposal's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) The construction monitoring must include:

- (a) marine traffic monitoring in accordance with the offshore in principle monitoring plan, including the provision of reports on the results of that monitoring at the end of each year of the construction period to the MMO, MCA and Trinity House;
- (b) in the event that driven or part-driven pile foundations are proposed, measurements of underwater sound generated by the installation of the first four piled foundations of each piled foundation type to be installed collectively under this licence and licence 1 unless the MMO otherwise agrees in writing; and



- (c) in the event that driven or part-driven pile foundations are proposed, measurements of underwater sound generated by the installation of the first two piled foundations where it is anticipated hammer energies greater than 3,000kJ may be required for installation, unless the MMO otherwise agrees in writing.
- (3) In the event that piled foundations are proposed to be used, the details submitted in accordance with the marine mammal mitigation protocol must include proposals for monitoring marine mammals.
- (4) The undertaker must carry out the monitoring approved under sub-paragraph (1), including any further underwater sound monitoring required in writing by the MMO, and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.
- (5) The results of the initial underwater sound measurements monitored in accordance with sub-paragraph (2)(b) must be provided to the MMO within six weeks of the installation of the first four piled foundations. The assessment of this report by the MMO will determine whether any further underwater sound monitoring is required. If, in the reasonable opinion of the MMO in consultation with the relevant statutory nature conservation body, the assessment shows significantly different underwater sound modelling results to those assessed in the environmental statement or failures in mitigation, all piling activity must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.
- (6) The results of the any underwater sound measurements monitored in accordance with sub-paragraph (2)(c) must be provided to the MMO within six weeks of the installation of the first two piled foundations that exceed 3,000kJ of hammer energy. The assessment of this report by the MMO will determine whether any further underwater sound monitoring is required. If, in the reasonable opinion of the MMO in consultation with the relevant statutory nature conservation body, the assessment shows significantly different underwater sound modelling results to those assessed in the environmental statement or failures in mitigation, any piling activity where the hammer energy is anticipated to exceed 3,000kJ must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.
- (7) The undertaker must carry out the surveys specified in the offshore monitoring plan in accordance with that plan, including any further underwater sound monitoring required in writing by the MMO under sub-paragraph (4), unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

### **Post-construction monitoring**

- 29.—(1) The undertaker must, in discharging condition 20(1)(c) submit details (which accord with the offshore in principle monitoring plan) for approval in writing by the MMO in consultation with relevant statutory nature conservation bodies of proposed post-construction monitoring, including methodologies and timings, and a proposed format, content and timings for providing reports on the results.
- (2) The monitoring proposals must specify each monitoring proposal's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.
- (3) The post-construction monitoring referred to in sub-paragraph (1) must, unless otherwise agreed in writing with the MMO, have due regard to, but not be limited to, the need to:
  - (a) undertake, within 12 months of completion of construction of the authorised scheme, a full sea floor coverage swath-bathymetry survey to IHO Order 1a standard that meets the requirements of MGN 654 and its supporting Hydrographic Guidelines for Offshore Renewable Energy Developers which includes the requirement for the full density data and reports to be delivered to the MCA and the UKHO for the update of nautical charts and publications, and side scan sonar, of the area(s) within the Order limits in which construction works were carried out to assess any changes in bedform topography and such further monitoring or assessment as may be agreed to ensure that cables (including fibre optic cables) have been buried or protected; and

- (b) undertake post-construction marine traffic monitoring in accordance with the offshore in principle monitoring plan, including the provision of reports on the results of that monitoring to the MMO, MCA and Trinity House.
- (4) The undertaker must carry out the monitoring agreed under sub-paragraph (1) and provide the agreed reports to the MMO in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.
- (5) Following the installation of cables, details of cable monitoring required under 20(1)(d)(i) must be updated with the results of the post installation surveys.

### **Reporting of scour and cable protection**

**30.**—(1) Not more than four months following completion of the construction of the authorised scheme, the undertaker must provide the MMO and the relevant statutory nature conservation bodies with a report setting out details of the cable protection and scour protection used for the authorised scheme.

(2) The report must include the following information—

- (a) the location of cable protection and scour protection;
- (b) the volume of cable protection and scour protection; and
- (c) any other information relating to the cable protection and scour protection as agreed between the MMO and the undertaker.

(3) Any cable protection (other than the replenishment or replacement of existing cable protection) authorised under this licence must be deployed within 10 years from the date of completion of construction (as reported in the close-out report under condition 31) unless otherwise agreed by the MMO in writing.

### **Completion of construction**

**31.**—(1) The undertaker must submit a close-out report to the MMO, MCA, Trinity House, the UKHO and the relevant statutory nature conservation body within four months of the date of completion of construction. The close out report must confirm the date of completion of construction and must include the following details—

- (a) the final number of installed offshore substation platforms;
- (b) the installed offshore substation platform parameters;
- (c) as built plans;
- (d) latitude and longitude coordinates of the centre point of the location for each offshore substation platform provided as Geographical Information System data referenced to WGS84 datum; and
- (e) latitude and longitude coordinates of the interconnector cables provided as Geographical Information System data referenced to WGS84 datum.

(2) Following completion of construction, no further construction activities can be undertaken under this licence.

### **Requirement for written approval**

**32.** Where under any of the above conditions the approval or agreement of the MMO is required, that approval or agreement must be given in writing.

## SCHEDULE 5

Article 11

### Documents to be certified

1. The following documents are the list referred to in article 11—

**Table 4**

| <i>Document Reference Number</i> | <i>Examination Library Reference</i> | <i>Document Name</i>                                                  | <i>Version</i> | <i>Date</i>   |
|----------------------------------|--------------------------------------|-----------------------------------------------------------------------|----------------|---------------|
| Plans and Drawings               |                                      |                                                                       |                |               |
| B2                               | APP-081                              | Order Limits and Grid Coordinates Plan                                | F01            | April 2024    |
| B3                               | APP-082                              | Works plan                                                            | F01            | April 2024    |
| Environmental Statement          |                                      |                                                                       |                |               |
| F1                               | APP-095                              | Non-technical summary                                                 | F01            | April 2024    |
| F1.1                             | APP-008                              | Volume 1, Chapter 1<br>Introduction and overarching glossary          | F01            | April 2024    |
| F1.2                             | APP-009                              | Volume 1, Chapter 2:<br>Policy and legislative context                | F01            | April 2024    |
| S_D6_15                          | REP6-024                             | Volume 1, Chapter 3:<br>Project description                           | F02            | February 2025 |
| F1.4                             | APP-011                              | Volume 1, Chapter 4: Site selection and consideration of alternatives | F01            | April 2024    |
| F1.5                             | APP-012                              | Volume 1, Chapter 5:<br>Environmental impact assessment methodology   | F01            | April 2024    |
| S_D6_16                          | REP6-026                             | Volume 2, Chapter 1:<br>Physical processes                            | F02            | February 2025 |
| S_D6_17                          | REP6-028                             | Volume 2, Chapter 2:<br>Benthic subtidal ecology                      | F02            | February 2025 |
| S_D6_18                          | REP6-030                             | Volume 2, Chapter 3: Fish and shellfish ecology                       | F02            | February 2025 |

|         |          |                                                                            |     |               |
|---------|----------|----------------------------------------------------------------------------|-----|---------------|
| S_D6_19 | REP6-031 | Volume 2,<br>Chapter 4:<br>Marine<br>mammals                               | F04 | February 2025 |
| S_D6_20 | REP6-033 | Volume 2,<br>Chapter 5:<br>Offshore<br>ornithology                         | F02 | February 2025 |
| F2.6    | APP-024  | Volume 2,<br>Chapter 6:<br>Commercial<br>fisheries                         | F01 | April 2024    |
| S_D6_21 | REP6-034 | Volume 2,<br>Chapter 7:<br>Shipping and<br>navigation                      | F02 | February 2025 |
| F2.8    | APP-026  | Volume 2,<br>Chapter 8:<br>Marine<br>archaeology and<br>cultural heritage  | F01 | April 2024    |
| S_D6_22 | REP6-035 | Volume 2,<br>Chapter 9: Other<br>sea users                                 | F02 | February 2025 |
| S_D6_23 | REP6-036 | Volume 2,<br>Chapter 10:<br>Seascape,<br>landscape and<br>visual resources | F02 | February 2025 |
| F2.11   | APP-015  | Volume 2,<br>Chapter 11:<br>Aviation and<br>radar                          | F01 | April 2024    |
| F2.12   | APP-016  | Volume 2,<br>Chapter 12:<br>Climate change                                 | F01 | April 2024    |
| S_D6_24 | REP6-037 | Volume 2,<br>Chapter 13:<br>Socio-economics                                | F02 | February 2025 |
| F2.14   | APP-018  | Volume 2,<br>Chapter 14:<br>Human health<br>assessment                     | F01 | April 2024    |
| F2.15   | APP-019  | Volume 2,<br>Chapter 15:<br>Inter-related<br>effects                       | F01 | April 2024    |
| F3.3.1  | APP-028  | Volume 3 Annex<br>3.1: Underwater<br>sound technical<br>report             | F01 | April 2024    |
| F3.3.2  | APP-029  | Volume 3 Annex<br>3.2: Sulphur<br>hexafluoride<br>report                   | F01 | April 2024    |

|         |          |                                                                                                   |     |               |
|---------|----------|---------------------------------------------------------------------------------------------------|-----|---------------|
| F3.3.3  | APP-030  | Volume 3 Annex 3.3: Scoping opinion                                                               | F01 | April 2024    |
| F3.5.1  | APP-031  | Volume 3 Annex 5.1: Cumulative effects screening matrix                                           | F01 | April 2024    |
| F3.5.2  | APP-032  | Volume 3 Annex 5.2: Transboundary impacts screening                                               | F01 | April 2024    |
| F4.1.1  | APP-033  | Volume 4 Annex 1.1: Physical processes technical report                                           | F01 | April 2024    |
| F4.2.1  | APP-050  | Volume 4 Annex 2.1: Benthic subtidal ecology technical report                                     | F01 | April 2024    |
| F4.3.1  | APP-051  | Volume 4 Annex 3.1: Fish and shellfish ecology technical report                                   | F01 | April 2024    |
| F4.4.1  | APP-052  | Volume 4 Annex 4.1: Marine mammals technical report                                               | F01 | April 2024    |
| S_D1_11 | REP1-026 | Volume 4 Annex 5.1: Offshore ornithology baseline characterisation                                | F02 | October 2024  |
| F4.5.2  | APP-054  | Volume 4 Annex 5.2: Offshore ornithology displacement technical report                            | F01 | April 2024    |
| S_D6_25 | REP6-038 | Volume 4 Annex 5.3: Offshore ornithology collision risk modelling technical report                | F02 | February 2025 |
| F4.5.4  | APP-056  | Volume 4 Annex 5.4: Offshore ornithology migratory bird collision risk modelling technical report | F01 | April 2024    |
| S_D6_26 | REP6-039 | Volume 4 Annex 5.5: Offshore ornithology apportioning technical report                            | F02 | February 2025 |

|         |          |                                                                                                       |     |               |
|---------|----------|-------------------------------------------------------------------------------------------------------|-----|---------------|
| F4.5.6  | APP-058  | Volume 4 Annex 5.6: Offshore ornithology PVA technical report                                         | F01 | April 2024    |
| S_D6_27 | REP6-040 | Volume 4 Annex 6.1: Commercial fisheries technical report                                             | F02 | February 2025 |
| S_D6_28 | REP6-041 | Volume 4 Annex 7.1: Navigational risk assessment                                                      | F02 | February 2025 |
| F4.8.1  | APP-061  | Volume 4 Annex 8.1: Marine archaeology technical report                                               | F01 | April 2024    |
| F4.8.2  | APP-062  | Volume 4 Annex 8.2: Cultural heritage assessment                                                      | F01 | April 2024    |
| F4.9.1  | APP-063  | Volume 4 Annex 9.1: Radar early warning systems technical report                                      | F01 | April 2024    |
| F4.10.1 | APP-034  | Volume 4 Annex 10.1: Seascape, landscape and visual resources legislation and planning policy context | F01 | April 2024    |
| F4.10.2 | APP-035  | Volume 4 Annex 10.2: Seascape and landscape character baseline technical report                       | F01 | April 2024    |
| F4.10.3 | APP-036  | Volume 4 Annex 10.3: Visual baseline technical report                                                 | F01 | April 2024    |
| F4.10.4 | APP-037  | Volume 4 Annex 10.4: Seascape, landscape and visual resources impact assessment methodology           | F01 | April 2024    |
| F4.10.5 | APP-038  | Volume 4 Annex 10.5: International and nationally designated landscape study                          | F01 | April 2024    |
| F4.10.6 | APP-039  | Volume 4 Annex 10.6: Seascape visualisations                                                          | F01 | April 2024    |



|          |                              |                                                                              |     |             |
|----------|------------------------------|------------------------------------------------------------------------------|-----|-------------|
|          |                              | Part 1 (Figures 1.1 – 9.1)                                                   |     |             |
| F4.10.6  | APP-040                      | Volume 4 Annex 10.6: Seascape visualisations<br>Part 2 (Figures 10.1 – 16.3) | F01 | April 2024  |
| F4.10.6  | APP-041                      | Volume 4 Annex 10.6: Seascape visualisations<br>Part 3 (Figures 16.4 – 25)   | F01 | April 2024  |
| F4.10.6  | APP-042                      | Volume 4 Annex 10.6: Seascape visualisations<br>Part 4 (Figures 26 – 43)     | F01 | April 2024  |
| F4.10.6  | APP-043                      | Volume 4 Annex 10.6: Seascape visualisations<br>Part 5 (Figures 44 – 61)     | F01 | April 2024  |
| F4.10.6  | APP-044                      | Volume 4 Annex 10.6: Seascape visualisations<br>Part 6 (Figures 62 – 74)     | F01 | April 2024  |
| F4.11.1  | APP-045                      | Volume 4, Annex 11.1: Aviation and radar technical report                    | F01 | April 2024  |
| F4.12.1  | APP-046                      | Volume 4, Annex 12.1: Technical greenhouse gas assessment                    | F01 | April 2024  |
| F4.12.2  | APP-047                      | Volume 4, Annex 11.2: Climate change risk assessment                         | F01 | April 2024  |
| F4.13.1  | APP-048                      | Volume 4, Annex 13.1: Socio-economics technical impact report                | F01 | April 2024  |
| F4.14.1  | APP-049                      | Volume 4, Annex 14.1: Airborne construction sound technical report           | F01 | April 2024  |
| S_PD_3.7 | PD1-012, PD1-013 and PD1-014 | Annex 3.7 to the Applicant's response to Relevant                            | F01 | August 2024 |

|          |          |                                                                                                                                       |     |               |
|----------|----------|---------------------------------------------------------------------------------------------------------------------------------------|-----|---------------|
|          |          | Representations from Natural England [Seascape, landscape and visual impact assessment]                                               |     |               |
| S_PD_3.9 | PD1-016  | Annex 3.9 to the Applicant's response to Relevant Representations from Natural England [Offshore ornithology]                         | F01 | August 2024   |
| S_D1_4.5 | REP1-010 | Annex 4.5 to Response to Hearing Action Point 15: Offshore Ornithology CEA and In-combination Gap-filling of Historical Projects Note | F01 | October 2024  |
| S_D1_4.6 | REP1-011 | Displacement Rates Clarification Note [Offshore ornithology]                                                                          | F01 | October 2024  |
| S_D1_4.8 | REP1-013 | Annex 4.8 to Response to Hearing Action Point 15: Great Orme Head SSSI Clarification Note                                             | F01 | October 2024  |
| S_D2_13  | REP2-021 | Treatment of Birds in Flight Data in Abundance Estimation                                                                             | F01 | October 2024  |
| S_D2_14  | REP2-022 | Great black-backed gull regional populations                                                                                          | F01 | October 2024  |
| S_D2_15  | REP2-023 | Review of Cumulative Effects Assessment and In-Combination Assessment                                                                 | F01 | October 2024  |
| S_D3_4.4 | REP3-010 | Annex 4.4 to the Applicant's                                                                                                          | F01 | November 2024 |

|           |          |                                                                                                                                                                       |     |               |
|-----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------|
|           |          | response to<br>EXQ1: SLVIA<br>Clarification<br>note                                                                                                                   |     |               |
| S_D3_9    | REP3-018 | Inclusion of<br>Awel y Môr in<br>Cumulative<br>Assessments –<br>Clarification<br>note                                                                                 | F01 | November 2024 |
| S_D3_10   | REP3-019 | Review of<br>Cumulative<br>Effects<br>Assessment and<br>In-Combination<br>Assessment:<br>Offshore<br>ornithology                                                      | F01 | November 2024 |
| S D4 6.1  | REP4-010 | Annex 6.1 to the<br>Applicant's<br>response to<br>Written<br>Representations<br>from MMO at<br>Deadline 3: Cod<br>spawning period<br>[Fish and<br>shellfish]          | F01 | December 2024 |
| S_D4_14   | REP4-023 | Greenhouse Gas<br>(GHG)<br>Reduction<br>Strategy                                                                                                                      | F01 | December 2024 |
| S_D4_15   | REP4-024 | Review of<br>Cumulative<br>Effects<br>Assessment and<br>In-Combination<br>Assessment:<br>Morgan and<br>Morecambe<br>Offshore Wind<br>Farms:<br>Transmission<br>Assets | F01 | December 2024 |
| S_D5_15   | REP5-031 | Additional PVA<br>Modelling for<br>Great Black-<br>Backed Gull<br>Cumulative<br>Assessment<br>[Offshore<br>ornithology]                                               | F01 | January 2025  |
| S_D5_16.1 | REP5-032 | Annex 16.1 to<br>Ornithological<br>assessment<br>clarification data                                                                                                   | F01 | January 2025  |

|            |          |                                                                                                                                |     |               |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------|-----|---------------|
|            |          | English sites                                                                                                                  |     |               |
| S_D5a_16.2 | AS-013   | Annex 16.2 to Ornithological assessment clarification data Welsh sites                                                         | F02 | January 2025  |
| S_D5_16.3  | REP5-034 | Annex 16.3 to Ornithological assessment clarification data offshore sites                                                      | F01 | January 2025  |
| S_D5_16    | REP5-035 | Ornithological assessment clarification data                                                                                   | F01 | January 2025  |
| S_D6_3.3   | REP6-007 | Helicopter Access Additional Flight Data                                                                                       | F01 | February 2025 |
| S_D6_3.4   | REP6-008 | Helicopter Access Additional Meteorological Analysis                                                                           | F01 | February 2025 |
| S_D6_29    | REP6-042 | Review of Cumulative Effects Assessment and In-Combination Assessment at Deadline 6                                            | F01 | February 2025 |
| S_D6_37.1  | REP6-057 | Appendix to Ornithological assessment clarification data (REP5-035) - Explanatory note to support SNCB and Applicant workbooks | F01 | February 2025 |
| S_D6_37.2  | REP6-058 | Annex 16.4 to Ornithological assessment clarification data (REP5-035) - Applicant's parameters (English sites)                 | F01 | February 2025 |
| S_D6_37.3  | REP6-059 | Annex 16.5 to Ornithological assessment clarification data (REP5-035) - Applicant's parameters (Welsh and                      | F01 | February 2025 |

|                 |          |                                                                                               |     |               |
|-----------------|----------|-----------------------------------------------------------------------------------------------|-----|---------------|
|                 |          | offshore sites)                                                                               |     |               |
| S_D6_39         | REP6-061 | Population Viability Analysis for the Regional Population of Guillemot [Offshore ornithology] | F01 | February 2025 |
| S_D6_40         | REP6-062 | Project alone and cumulative assessment for the Great Orme's Head SSSI [Offshore ornithology] | F02 | February 2025 |
| S_D6_41         | REP6-063 | Technical Note: Calculation of the Net Effects on Greenhouse Gas Emissions                    | F02 | February 2025 |
| S_D7_3.1        | REP7-005 | Annex 3.1 Warton Aerodrome CNS Safeguarding Assessment Report                                 | F01 | March 2025    |
| Other Documents |          |                                                                                               |     |               |
| S_D4_11         | REP4-018 | Outline Offshore Environmental Management Plan                                                | F01 | December 2024 |
| S_D4_22         | REP4-032 | Outline offshore construction method statement                                                | F01 | December 2024 |
| S_D5_19         | REP5-039 | Outline offshore written scheme of investigation for archaeology                              | F02 | January 2025  |
| S_D6_30.1       | REP6-045 | Outline underwater sound management strategy                                                  | F04 | February 2025 |
| S_D5_23         | REP5-046 | Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels  | F02 | January 2025  |
| S_D6_31         | REP6-047 | Outline marine mammal mitigation protocol                                                     | F04 | February 2025 |

|         |          |                                                  |     |               |
|---------|----------|--------------------------------------------------|-----|---------------|
| S_D6_32 | REP6-049 | Outline offshore operations and maintenance plan | F02 | February 2025 |
| S_D6_33 | REP6-051 | Commitments Register                             | F05 | February 2025 |
| S_D6_34 | REP6-054 | Offshore in-principle monitoring plan            | F02 | February 2025 |
| S_D6_35 | REP6-055 | Outline vessel traffic management plan           | F04 | February 2025 |
| S_D6_45 | REP6-069 | Outline fisheries liaison and co-existence plan  | F06 | February 2025 |

### **EXPLANATORY NOTE**

*(This note is not part of the Regulations)*

This Order grants development consent for, and authorises the construction, operation and maintenance of an offshore wind farm generating station located approximately 36km from the North-West coast of England, together with associated development. This Order imposes requirements in connection with the development.

A copy of the plans referred to in this Order and certified in accordance with article 11 (certification of plans, etc.) may be inspected free of charge at the offices of Lancashire County Council, County Hall, Fishergate, Preston, Lancashire, PR1 8XJ.



**2025 No.**

**INFRASTRUCTURE PLANNING**

**The Morgan Offshore Wind Project: Generation Assets Order  
202[]**

|                               |         |     |
|-------------------------------|---------|-----|
| <i>Made</i>                   | - - - - | *** |
| <i>Laid before Parliament</i> |         | *** |
| <i>Coming into force</i>      |         | *** |

**CONTENTS**

**PART 1**

**Preliminary**

|    |                           |   |
|----|---------------------------|---|
| 1. | Citation and commencement | 2 |
| 2. | Interpretation            | 2 |

**PART 2**

**Principal Powers**

|    |                                               |   |
|----|-----------------------------------------------|---|
| 3. | Development consent etc. granted by the Order | 6 |
| 4. | Operation of generating station               | 6 |
| 5. | Deemed marine licences under the 2009 Act     | 6 |
| 6. | Power to maintain the authorised project      | 6 |
| 7. | Benefit of the Order                          | 6 |

**PART 3**

**Miscellaneous and general**

|     |                                         |   |
|-----|-----------------------------------------|---|
| 8.  | Abatement of works abandoned or decayed | 8 |
| 9.  | Saving provisions for Trinity House     | 8 |
| 10. | Crown rights                            | 8 |
| 11. | Certification of plans, etc.            | 9 |
| 12. | Service of notices                      | 9 |

---

|                                     |    |
|-------------------------------------|----|
| SCHEDULE 1 — Authorised Development | 10 |
| PART 1 — Authorised Development     | 10 |
| PART 2 — Ancillary Works            | 12 |

|                                                                                                                               |    |
|-------------------------------------------------------------------------------------------------------------------------------|----|
| SCHEDULE 2 — Requirements                                                                                                     | 12 |
| SCHEDULE 3 — Deemed Marine Licence under the 2009 Act – Licence 1: Wind<br>Turbine Generators and Associated Infrastructure   | 19 |
| PART 1 — Licensed marine activities                                                                                           | 19 |
| PART 2 — Conditions                                                                                                           | 28 |
| SCHEDULE 4 — Deemed Marine Licence under the 2009 Act – Licence 2:<br>Offshore Substation Platforms and Interconnector Cables | 41 |
| PART 1 — Licensed marine activities                                                                                           | 41 |
| PART 2 — Conditions                                                                                                           | 49 |
| SCHEDULE 5 — Documents to be certified                                                                                        | 62 |

An application has been made to the Secretary of State under section 37 of the Planning Act 2008(a) (“the 2008 Act”) for an Order granting development consent.

The application was examined by a panel of [x] members (appointed by the Secretary of State) in accordance with Part 6 of the 2008 Act and carried out in accordance with the Infrastructure Planning (Examination Procedure) Rules 2010(b).

The panel, having considered the representations made and not withdrawn and the application together with the accompanying documents, in accordance with section 74(2) of the 2008 Act, has submitted a report and recommendation to the Secretary of State.

The Secretary of State has considered the [representations made and not withdrawn], and the report and recommendation of the panel, has taken into account the environmental information in accordance with regulation 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017(c), and, as a national policy statement as effect in relation to the proposed development, has had regard to the documents and matters referred to in section 104(2) of the 2008 Act.

The Secretary of State, in exercise of the powers conferred by sections [114, 115, 120 and 132, and schedule 5] to the 2008 Act, makes the following Order:

## PART 1

### Preliminary

#### Citation and commencement

1. This Order may be cited as the Morgan Offshore Wind Project Generation Assets Order 202[•] and comes into force on [•] 202[•].

#### Interpretation

2.—(1) Except for Schedule 3 (deemed marine licence under the 2009 Act – Licence 1: Wind Turbine Generators and Associated Infrastructure) and Schedule 4 (deemed marine licence under the 2009 Act – Licence 2: Offshore Substation Platforms and Interconnector Cables), which are subject to the definitions in those Schedules, in this Order—

---

(a) 2008 c.29. Section 37 was amended by section 128(2) and Schedule 13, Part 1, paragraphs 1 to 5 of the Localism Act 2011 (c.20).  
(b) S.I. 2010/103. This instrument was amended by S.I. 2012/635.  
(c) S.I. 2017/572.

“1989 Act” means the Electricity Act 1989(a);

“2004 Act” means the Energy Act 2004(b);

“2008 Act” means the Planning Act 2008;

“2009 Act” means the Marine and Coastal Access Act 2009(c);

“address” includes any number or address used for the purposes of electronic transmission;

“ancillary works” means the ancillary works described in Part 2 of Schedule 1 (ancillary works) and any other works authorised by this Order that are not development within the meaning of section 32 of the 2008 Act;

“authorised development” means the development and associated development described in Part 1 of Schedule 1 (authorised development) and any other development authorised by this Order that is development within the meaning of section 32 of the 2008 Act;

“authorised project” means the authorised development and ancillary works;

“bank holiday” means a bank holiday in England and Wales under section 1 of the Banking and Financial Dealings Act 1971(d);

“buoy” means any floating device used for navigational purposes or measurement purposes, including but not limited to wave buoys, LiDAR and guard buoys;

“cable” means up to 400kV cables for the transmission of electricity and includes fibre optic and other communications cables either within the cable or laid alongside;

“cable crossings” means the crossing of sub-sea cables, pipelines or other existing infrastructure by the cables (including inter-array cables) authorised by this Order together with cable protection;

“cable protection” means measures to protect cables from physical damage including but not limited to concrete mattresses, with or without frond devices, and/or rock placement, the use of bagged solutions filled with grout or other materials;

“commence” means the first carrying out of any licensed activities authorised by licence 1 or licence 2, save for pre-construction surveys, monitoring surveys, unexploded ordnance surveys and clearance of low order unexploded ordnance approved under licence 1 or licence 2, and “commenced” and “commencement” must be construed accordingly;

“electronic transmission” means a communication transmitted—

- (a) by means of an electronic communications network; or
- (b) by other means but while in electronic form;

“environmental statement” means the document certified as the environmental statement by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“deemed marine licences” means the marine licences set out in Schedules 3 (Deemed Marine Licence under the 2009 Act – Licence 1: Wind Turbine Generators and Associated Infrastructure) and 4 (Deemed Marine Licence under the 2009 Act – Licence 2: Offshore Substation Platforms and Interconnector Cables);

“foundation” means any one or more of: a multi-leg pin-piled jacket, multi-leg suction bucket jacket, or gravity base foundation;

“gravity base foundation” means a structure principally of steel, concrete, or steel and concrete with a base which rests on the seabed either due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“inter-array cables” means the cables linking the wind turbine generators to each other and to the offshore substation platforms;

---

(a) 1989 c.29.  
 (b) 2004 c.20.  
 (c) 2009 c.23.  
 (d) 1971 c.80.

“interconnector cables” means the cables linking the offshore substation platforms to each other;

“jacket foundation” means a steel jacket/lattice-type structure constructed principally of steel, fixed to the seabed with pin-piles or steel suction buckets and associated equipment including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“km” means kilometres;

“LAT” means lowest astronomical tide;

“licensed activities” means the activities specified in Part 1 of the deemed marine licences;

“licence 1” means the marine licence set out in Schedule 3 (Deemed marine licence under the 2009 Act – Licence 1: Wind Turbine Generators and other Offshore Infrastructure);

“licence 2” means the marine licence set out in Schedule 4 (Deemed marine licence under the 2009 Act – Licence 2: Offshore Substation Platforms and Interconnector Cables);

“LiDAR” means a light detection and ranging system used to measure weather and sea conditions;

“m” means metres and “m<sup>2</sup>” means metres squared;

“maintain” includes inspect, upkeep, repair, adjust or alter the authorised development, and remove, reconstruct or replace any part of the authorised development, to the extent assessed in the environmental statement; and any derivative of “maintain” is to be construed accordingly;

“Marine Management Organisation” means the body created under the 2009 Act which is responsible for the regulation of licence 1 and licence 2 or any successor of that function and “MMO” must be construed accordingly;

“measures to minimise disturbance to marine mammals and rafting birds from transiting vessels” means the document certified as the measures to minimise disturbance to marine mammals and rafting birds from transiting vessels by the Secretary of State under article 11 (certification of plans etc.) for the purposes of this Order;

“offshore in principle monitoring plan” means the document certified as the offshore in principle monitoring plan by the Secretary of State under article 11 (certification of plans, etc.) of the Order;

“offshore substation platform” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and open with modular equipment or fully clad, containing—

(c) electrical equipment required to switch, transform or convert electricity generated at the wind turbine generators to a higher voltage and provide reactive power compensation, including high voltage power transformers, high voltage switchgear and busbars, substation auxiliary systems and low voltage distribution, instrumentation, metering equipment and control systems, standby generators, shunt reactors, auxiliary and uninterruptible power supply systems;

(d) accommodation, storage, workshop auxiliary equipment and facilities for operating, maintaining and controlling the substation or wind turbine generators, including navigation, aviation and safety marketing and lighting, systems for vessel charging, access and retrieval, cranes, potable water supply, black water separation, stores, fuels and spares, communications systems and control hub facilities and other associated equipment and facilities;

“offshore surface structures” means offshore substation platforms and wind turbine generators;

“Order limits” means the limits shown on the order limits and grid coordinates plan within which the authorised development may be carried out;

“order limits and grid coordinates plan” means the document certified as the order limits and grid coordinates plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline environmental management plan” plan means the document certified as the outline environmental management plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline fisheries liaison and co-existence plan” plan means the document certified as the outline fisheries liaison and co-existence plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline marine mammal mitigation protocol” means the document certified as the outline marine mammal mitigation protocol” by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore written scheme of investigation for archaeology” means the document certified as the outline offshore written scheme of investigation for archaeology by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“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 11 (certification of plans, etc.) of this Order;

“outline underwater sound management strategy” means the document certified as the outline underwater sound management strategy” by the Secretary of State under article 11 (certification of plans, etc.) of the Order;

“outline vessel traffic management plan” means the document certified as the outline vessel traffic management plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“operation” means the undertaking of activities authorised by this Order which are not part of the construction, commissioning or decommissioning of the authorised development;

“pin-piles” means steel or concrete cylindrical piles driven and/or drilled into the seabed to secure jacket foundations;

“requirements” means those matters set out in Part 1 of Schedule 2 (requirements) to this Order;

“scour protection” means measures to prevent loss of seabed sediment around any structure placed in or on the seabed including by the use of bagged solutions, filled with grout or other materials, protective aprons, mattresses with or without frond devices, and rock and gravel placement;

“scheduled works” means the numbered works specified in Part 1 of Schedule 1 (authorised development) to this Order, or any part of them;

“suction bucket foundation” means a tubular steel structure which partially or fully penetrates the seabed and associated equipment, including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“undertaker” means Morgan Offshore Wind Limited (company registration number: 13497271) whose registered office address is Chertsey Road, Sunbury on Thames, Middlesex, United Kingdom, TW16 7BP;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“wind turbine generator” means a structure comprising a tower, rotor with three blades connected at the hub, nacelle and ancillary electrical and other equipment which may include J-tube(s), transition piece, access and rest platforms, access ladders, boat access systems, corrosion protection systems, fenders and maintenance equipment, helicopter landing facilities and other associated equipment including communications equipment, fixed to a foundation or transition piece;

“the works plan” means the plan certified as the works plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order.

(2) All distances, directions, areas and lengths referred to in this Order are approximate and distances between points on a work comprised in the authorised development are taken to be measured along that work.

(3) References in this Order to points identified by letters or numbers are to be construed as references to points so lettered or numbered on the relevant plans.

(4) References in this Order to numbered works are references to the works as numbered in Part 1 of Schedule 1 (authorised development).

## **PART 2**

### **Principal Powers**

#### **Development consent etc. granted by the Order**

3.—(1) Subject to the provisions of this Order and to the requirements in schedule 2 the undertaker is granted—

- (a) development consent for the authorised development; and
- (b) consent for the ancillary works;

to be carried out within the Order limits.

#### **Operation of generating station**

4.—(1) The undertaker is authorised to use and operate the authorised development for which development consent is granted by this Order.

(2) Paragraph (1) does not relieve the undertaker of any requirement to obtain any permit or licence under any legislation that may be required from time to time to authorise the operation of the authorised development.

#### **Deemed marine licences under the 2009 Act**

5. The marine licences set out in Schedules 3 and 4 are deemed to have been granted to the undertaker under Part 4 (marine licensing) of the 2009 Act for the licensed activities specified in Part 1 of each licence and subject to the conditions specified in Part 2 of each licence.

#### **Power to maintain the authorised project**

6.—(1) Subject to paragraph (2), the undertaker may at any time maintain the authorised project, except to the extent that this Order or an agreement made under this Order provides otherwise.

(2) The power to maintain conferred under paragraph (1) does not relieve the undertaker of any requirement to obtain any further licence under Part 4 (marine licensing) of the 2009 Act for the licensable activities not authorised by licence 1 or licence 2.

#### **Benefit of the Order**

7.—(1) Subject to this article, the provisions of this Order have effect solely for the benefit of the undertaker.

(2) Subject to sub-paragraph (5), the undertaker may with the written consent of the Secretary of State—

- (a) transfer to another person (“the transferee”) any or all of the benefit of the provisions of this Order (excluding deemed marine licence 1 or licence 2 referred to in sub-paragraph



(3) below) and such related statutory rights as may be agreed between the undertaker and the transferee; and

- (b) grant to another person (“the lessee”) for a period agreed between the undertaker and the lessee any or all of the benefit of the provisions of this Order (excluding deemed marine licence 1 or licence 2) and such related statutory rights as may be so agreed,

except where sub-paragraph (6) applies, in which case the consent of the Secretary of State is not required.

(3) Subject to sub-paragraph (5), the undertaker may with the written consent of the Secretary of State—

- (a) where an agreement has been made in accordance with sub-paragraph (2)(a), transfer to the transferee the whole of deemed marine licence 1 or licence 2 (as appropriate) granted under Schedules 3 and 4 of this Order and such related statutory rights as may be agreed between the undertaker and the transferee; or
- (b) where an agreement has been made in accordance with sub-paragraph (2)(b), grant to the lessee for the duration mentioned in sub-paragraph (2)(b), the whole of deemed marine licence 1 or licence 2 (as appropriate) granted under Schedules 3 and 4 of this Order and such related statutory rights as may be so agreed,

except where sub-paragraph (6) applies, in which case the consent of the Secretary of State is not required.

(4) The Secretary of State must consult the MMO before giving consent to the transfer or grant to another person of the benefit of the provisions of deemed marine licence 1 or licence 2.

(5) Where the undertaker has transferred any benefit, or for the duration of any period during which the undertaker has granted any benefit, under sub-paragraphs (2) or (3)—

- (a) the benefit transferred or granted (“the transferred benefit”) shall include any rights that are conferred, and any obligations that are imposed, by virtue of the provisions to which the benefit relates;
- (b) the transferred benefit shall reside exclusively with the transferee or, as the case may be the lessee, and the transferred benefit shall not be enforceable against the undertaker save in the case of a deemed marine licence transferred or granted in respect of any breach of an obligation by the undertaker which occurs prior to such transfer or grant or which occurs as a result of any activity carried out by the undertaker on behalf of the transferee; and
- (c) the exercise by a person of any benefits or rights conferred in accordance with any transfer or grant under sub-paragraphs (2) or (3) is subject to the same restrictions, liabilities and obligations as would apply under this Order if those benefits or rights were exercised by the undertaker.

(6) No consent of the Secretary of State is required where the transferee or lessee is the holder of a licence under section 6 (licences authorising supply, etc.) of the 1989 Act(a).

(7) Where an agreement has been made in accordance with sub-paragraphs (2) or (3) references in this Order to the undertaker, will include references to the transferee or lessee.

(8) Prior to any transfer or grant under this article taking effect the undertaker must give notice in writing to the Secretary of State and the MMO.

(9) A notice required under sub-paragraph (8) must—

- (a) state—
  - (i) the name and contact details of the person to whom the benefit of the provisions will be transferred or granted;

---

(a) Section 6 was amended by sections 89, 136, 198, 143 and 145, Part 1 of Schedule 23 and paragraphs 3 and 5 of Schedule 19 to the Energy Act 2004 (c.20), sections 72 and 121 and Schedule 1 to the Energy Act 2011 (c.16), sections 166, 186, 334 and 205 to the Energy Act 2023 (c.52), S.I. 2011/2704. There are other amendments to section 6 which are not relevant to the Order.

- (ii) the date on which the transfer will take effect (which must be at least 28 days after the date on which the notice is given);
  - (iii) the provisions to be transferred or granted; and
  - (iv) the restrictions, liabilities, and obligations that, in accordance with sub-paragraph (5)(c), will apply to the person exercising the powers transferred or granted.
- (b) be accompanied by—
- (i) where relevant, a plan showing the works or areas to which the transfer or grant relates; and
  - (ii) a copy of the document effecting the transfer or grant signed by the undertaker and the person to whom the benefit of the powers will be transferred or granted.

(10) The notice specified under sub-paragraph (8) must be signed by the undertaker and the person to whom the benefit of the powers will be transferred or granted as specified in that notice.

(11) Section 72(7) and (8) of the 2009 Act do not apply to a transfer or grant of the benefit of the provisions of deemed marine licence 1 or licence 2 to another person by the undertaker pursuant to an agreement under this article save that the MMO may amend any deemed marine licence granted under Schedule 3 or Schedule 4 of the Order to correct the name of the undertaker to the name of a transferee or lessee under this article 7 (benefit of the Order).

## PART 3

### Miscellaneous and general

#### **Abatement of works abandoned or decayed**

8. Where the scheduled works or any part of them are abandoned or allowed to fall into decay, the Secretary of State may, following consultation with the undertaker, issue a written notice requiring the undertaker at its own expense either to repair, make safe and restore one or any of the scheduled works or any relevant part of them, or to remove them or any relevant part of them, and without prejudice to any notice served under section 105(2) (requirement to prepare decommissioning programmes) of the 2004 Act<sup>(a)</sup>, restore the site to a safe and proper condition, to such an extent and within such limits as may be specified in the notice.

#### **Saving provisions for Trinity House**

9. Nothing in this Order prejudices or derogates from any of the rights, duties or privileges of Trinity House.

#### **Crown rights**

10.—(1) Nothing in this Order affects prejudicially any estate, right, power, privilege, authority or exemption of the Crown and in particular, nothing in this Order authorises the undertaker or any licensee to use, enter upon or in any manner interfere with any rights of any description belonging to His Majesty in right of the Crown and forming part of The Crown Estate without the consent in writing of the Crown Estate Commissioners.

(2) A consent under paragraph (1) may be given unconditionally or subject to terms and conditions; and is deemed to have been given in writing where it is sent electronically.

---

<sup>(a)</sup> Section 105 was amended by section 69 of the Energy Act 2008 (c.32).

### **Certification of plans, etc.**

11.—(1) The undertaker must, as soon as practicable after the making of this Order, submit to the Secretary of State copies of all documents listed in Schedule 5 for certification that they are true copies of the documents referred to in this Order.

(2) A plan or document so certified is admissible in any proceedings as evidence of the contents of the document of which it is a copy.

### **Service of notices**

12.—(1) A notice or other document required or authorised to be served for the purposes of this Order may be served—

- (a) by post;
- (b) by delivering it to the person on whom it is to be served or to whom it is to be given or supplied; or
- (c) with the consent of the recipient and subject to paragraphs (5) to (8) by electronic transmission.

(2) Where the person on whom a notice or other document to be served for the purposes of this Order is a body corporate, the notice or document is duly served if it is served on the secretary or clerk of that body.

(3) For the purposes of section 7 (references to service by post) of the Interpretation Act 1978<sup>(a)</sup> as it applies for the purposes of this article, the proper address of any person in relation to the service on that person of a notice or document under paragraph (1) is, if that person has given an address for service, that address, and otherwise—

- (a) in the case of the secretary or clerk of a body corporate, the registered or principal office of that body; and
- (b) in any other case, the last known address of that person at the time of service.

(4) Where a notice or other document required to be served or sent for the purposes of this Order is served or sent by electronic transmission the requirement is to be taken to be fulfilled only where—

- (a) the recipient of the notice or other document to be transmitted has given consent to the use of electronic transmission in writing or by electronic transmission;
- (b) the notice or document is capable of being accessed by the recipient;
- (c) the notice or document is legible in all material respects; and
- (d) the notice or document is in a form sufficiently permanent to be used for subsequent reference.

(5) Where the recipient of a notice or other document served or sent by electronic transmission notifies the sender within seven days of receipt that the recipient requires a paper copy of all or part of that notice or other document the sender must provide such a copy as soon as reasonably practicable.

(6) Any consent to the use of electronic communication given by a person may be revoked by that person in accordance with paragraph (7).

(7) Where a person is no longer willing to accept the use of electronic transmission for any of the purposes of this Order—

- (a) that person must give notice in writing or by electronic transmission revoking any consent given by that person for that purpose; and
- (b) such revocation is final and takes effect on a date specified by the person in the notice but that date must not be less than seven days after the date on which the notice is given.

---

(a) 1978 c.30.

(8) This article does not exclude the employment of any method of service not expressly provided for by it.

(9) In this article “legible in all material respects” means that the information contained in the notice or document is available to that person to no lesser extent than it would be if served, given or supplied by means of a notice or document in printed form.

Signed by the authority of the Secretary of State for Energy Security and Net Zero

Address  
Date

Name  
Title  
Department

## SCHEDULE 1 Articles 3 and 4

### Authorised Development

#### PART 1

##### Authorised Development

1. A nationally significant infrastructure project as defined in sections 14 (nationally significant infrastructure projects: general) and 15 (generating stations) of the 2008 Act located in the Irish Sea approximately 36 kilometres from the coast of north-west England comprising an offshore wind generating station with an electrical output capacity of over 100MW.

*Work No. 1—*

- (a) up to 96 wind turbine generators; and
- (b) a network of subsea inter-array cables between the wind turbine generators including cable crossings and cable protection;

*Work No. 2—* up to four offshore substation platforms; and

*Work No. 3—* a network of subsea interconnector cables between the offshore substation platforms including cable crossings and cable protection.

In connection with the scheduled works and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised development and which fall within the scope of the work assessed by the environmental statement, including—

- (c) scour protection around the foundations of the offshore structures;
- (d) cable protection measures, such as the placement of rock and/or concrete mattresses, with or without frond devices;
- (e) dredging;
- (f) the removal of material from the seabed and the disposal of inert material of natural origin within the Order limits produced during construction drilling, seabed preparation for foundation works, cable installation preparation such as sandwave clearance, boulder clearance and pre-trenching;
- (g) creation and use of temporary vessel laydown areas and use of cable anchors;
- (h) removal of static fishing equipment;
- (i) the use of extracted seabed material within gravity base foundations; and
- (j) lighting.

2. The grid coordinates for the scheduled works are as shown on the order limits and grid coordinates plan and as specified below:

| <i>Point ID</i> | <i>Latitude</i>   | <i>Longitude</i> |
|-----------------|-------------------|------------------|
| 1               | 53° 54' 27.788" N | 3° 58' 8.915" W  |
| 2               | 53° 54' 41.257" N | 3° 58' 42.184" W |
| 3               | 53° 57' 6.032" N  | 4° 3' 55.525" W  |
| 4               | 53° 57' 7.936" N  | 4° 4' 25.017" W  |
| 5               | 53° 57' 13.636" N | 4° 5' 53.497" W  |
| 6               | 53° 58' 7.549" N  | 4° 7' 48.094" W  |
| 7               | 54° 0' 28.539" N  | 4° 12' 48.480" W |
| 8               | 54° 0' 33.128" N  | 4° 12' 41.699" W |
| 9               | 54° 0' 39.541" N  | 4° 12' 32.331" W |
| 10              | 54° 0' 49.220" N  | 4° 12' 18.682" W |
| 11              | 54° 0' 58.979" N  | 4° 12' 5.399" W  |
| 12              | 54° 1' 0.852" N   | 4° 12' 2.795" W  |
| 13              | 54° 1' 10.663" N  | 4° 11' 49.441" W |
| 14              | 54° 1' 20.488" N  | 4° 11' 36.537" W |
| 15              | 54° 1' 26.187" N  | 4° 11' 24.779" W |
| 16              | 54° 1' 31.886" N  | 4° 11' 13.315" W |
| 17              | 54° 1' 33.367" N  | 4° 11' 10.387" W |
| 18              | 54° 1' 34.438" N  | 4° 11' 8.270" W  |
| 19              | 54° 1' 39.125" N  | 4° 10' 59.214" W |
| 20              | 54° 1' 41.978" N  | 4° 10' 53.701" W |
| 21              | 54° 1' 42.739" N  | 4° 10' 52.231" W |
| 22              | 54° 1' 47.148" N  | 4° 10' 43.936" W |
| 23              | 54° 1' 48.940" N  | 4° 10' 40.404" W |
| 24              | 54° 1' 57.247" N  | 4° 10' 24.352" W |
| 25              | 54° 2' 5.706" N   | 4° 10' 8.569" W  |
| 26              | 54° 2' 11.564" N  | 4° 9' 57.954" W  |
| 27              | 54° 2' 14.425" N  | 4° 9' 52.857" W  |
| 28              | 54° 2' 14.433" N  | 4° 9' 52.843" W  |
| 29              | 54° 2' 14.446" N  | 4° 9' 52.820" W  |
| 30              | 54° 2' 23.202" N  | 4° 9' 37.580" W  |
| 31              | 54° 2' 23.221" N  | 4° 9' 37.547" W  |
| 32              | 54° 2' 23.229" N  | 4° 9' 37.534" W  |
| 33              | 54° 2' 23.238" N  | 4° 9' 37.518" W  |
| 34              | 54° 2' 23.239" N  | 4° 9' 37.517" W  |
| 35              | 54° 2' 32.133" N  | 4° 9' 22.564" W  |
| 36              | 54° 2' 32.146" N  | 4° 9' 22.542" W  |
| 37              | 54° 2' 32.159" N  | 4° 9' 22.521" W  |
| 38              | 54° 2' 32.166" N  | 4° 9' 22.509" W  |
| 39              | 54° 2' 32.172" N  | 4° 9' 22.500" W  |
| 40              | 54° 2' 41.223" N  | 4° 9' 7.804" W   |
| 41              | 54° 2' 41.236" N  | 4° 9' 7.782" W   |
| 42              | 54° 2' 41.249" N  | 4° 9' 7.761" W   |
| 43              | 54° 2' 41.257" N  | 4° 9' 7.749" W   |
| 44              | 54° 2' 41.263" N  | 4° 9' 7.739" W   |
| 45              | 54° 2' 50.489" N  | 4° 8' 53.271" W  |
| 46              | 54° 2' 59.863" N  | 4° 8' 39.076" W  |

|    |                   |                  |
|----|-------------------|------------------|
| 47 | 54° 3' 9.407" N   | 4° 8' 25.119" W  |
| 48 | 54° 3' 19.079" N  | 4° 8' 11.466" W  |
| 49 | 54° 3' 28.890" N  | 4° 7' 58.099" W  |
| 50 | 54° 3' 38.836" N  | 4° 7' 45.024" W  |
| 51 | 54° 3' 48.923" N  | 4° 7' 32.234" W  |
| 52 | 54° 3' 52.208" N  | 4° 7' 28.172" W  |
| 53 | 54° 3' 56.043" N  | 4° 7' 23.528" W  |
| 54 | 54° 3' 59.107" N  | 4° 7' 19.782" W  |
| 55 | 54° 3' 59.122" N  | 4° 7' 19.764" W  |
| 56 | 54° 3' 59.130" N  | 4° 7' 19.754" W  |
| 57 | 54° 4' 1.160" N   | 4° 7' 17.353" W  |
| 58 | 54° 4' 1.181" N   | 4° 7' 17.328" W  |
| 59 | 54° 4' 6.734" N   | 4° 7' 10.779" W  |
| 60 | 54° 4' 7.781" N   | 4° 7' 9.560" W   |
| 61 | 54° 4' 9.456" N   | 4° 7' 7.587" W   |
| 62 | 54° 4' 13.935" N  | 4° 7' 2.501" W   |
| 63 | 54° 4' 16.028" N  | 4° 7' 0.112" W   |
| 64 | 54° 4' 18.943" N  | 4° 6' 56.806" W  |
| 65 | 54° 4' 19.913" N  | 4° 6' 55.716" W  |
| 66 | 54° 4' 24.700" N  | 4° 6' 50.475" W  |
| 67 | 54° 4' 30.489" N  | 4° 6' 44.156" W  |
| 68 | 54° 4' 35.097" N  | 4° 6' 39.269" W  |
| 69 | 54° 4' 40.000" N  | 4° 6' 34.145" W  |
| 70 | 54° 4' 41.189" N  | 4° 6' 32.904" W  |
| 71 | 54° 4' 45.972" N  | 4° 6' 28.021" W  |
| 72 | 54° 3' 42.182" N  | 4° 0' 24.131" W  |
| 73 | 54° 0' 25.772" N  | 3° 53' 55.337" W |
| 74 | 53° 58' 34.172" N | 3° 47' 19.232" W |
| 75 | 53° 56' 34.760" N | 3° 47' 14.121" W |

## PART 2

### Ancillary Works

3. Works within the Order limits which fall within the scope of the work assessed by the environmental statement comprising –

- (a) temporary landing places, moorings or other means of accommodating vessels in the construction and/or maintenance of the authorised development; and
- (b) buoys, beacons, fenders and other navigational warning or ship impact protection works.

## SCHEDULE 2

Article 3

### Requirements

#### Time limits

1. The authorised development must commence no later than the expiration of five years beginning with the date this Order comes into force.



## Design parameters

2.—(1) The wind turbine generators to be constructed as part of the authorised development must be located within the area shown on the works plan.

(2) No part of any wind turbine generators to be constructed as part of the authorised development shall extend beyond the Order limits.

(3) The authorised development must be constructed in accordance with the parameters assessed in the environmental statement and set out in Table 1.

(4) References to the location of an offshore surface structure in Table 1 is a reference to the centre point of that structure.

(5) In the event that driven or part-driven pile foundations are proposed to be used, the hammer energy used to drive or part-drive the pile foundations must not exceed—

- (a) 4,400kJ in respect of pin pile foundations at up to 16 locations; and
- (b) 3,000kJ in respect of any other foundations.

**Table 1**

| <i>Parameter</i>                                                                                                 | <i>Value</i> |
|------------------------------------------------------------------------------------------------------------------|--------------|
| Maximum number of wind turbine generators                                                                        | 96           |
| Maximum height of wind turbine generators when measured from LAT to the tip of the vertical blade (m)            | 364          |
| Maximum rotor diameter of each wind turbine generator (m)                                                        | 320          |
| Maximum rotor swept area (m <sup>2</sup> )                                                                       | 5,468,884    |
| Minimum distance from LAT to the lowest point of the rotating blade for each turbine (m)                         | 34           |
| Minimum distance from HAT to the lowest point of the rotating blade for each turbine (m)                         | 26           |
| Minimum distance between all offshore surface structures (in all directions) (m)                                 | 1,400        |
| Maximum diameter of pin-piles for wind turbine generators on jacket pin-pile foundations (m)                     | 5.5          |
| Maximum diameter of gravity base at the seabed for wind turbine generators on gravity base foundations (m)       | 49           |
| Maximum diameter of buckets for wind turbine generators on suction bucket jackets (m)                            | 18           |
| Maximum diameter of pin-piles for offshore substation platforms on jacket pin-pile foundations (m)               | 5.5          |
| Maximum diameter of gravity base at the seabed for offshore substation platforms on gravity base foundations (m) | 80           |
| Maximum diameter of buckets for offshore substation platforms on suction bucket jackets (m)                      | 18           |
| Maximum number of wind turbines on jacket driven pin-pile foundations                                            | 64           |
| Maximum total volume of extracted seabed material to be used in gravity base foundations (m <sup>3</sup> )       | 490,000      |
| Maximum total seabed footprint of wind turbine generators (including scour protection) (m <sup>2</sup> )         | 735,488      |
| Maximum volume of scour protection for wind turbine generators (m <sup>3</sup> )                                 | 1,701,998    |
| Maximum volume of scour protection for offshore substation foundations (m <sup>3</sup> )                         | 58,361       |
| Maximum number of offshore substation platforms                                                                  | 4            |
| Maximum dimensions of offshore substations (excluding towers, helipads, masts, and cranes):                      |              |

|                                                                                                                        |         |
|------------------------------------------------------------------------------------------------------------------------|---------|
| Height when measured from LAT (m)                                                                                      | 70      |
| Length (m)                                                                                                             | 80      |
| Width (m)                                                                                                              | 60      |
| Maximum total seabed footprint area for offshore substation foundations (including scour protection) (m <sup>2</sup> ) | 24,964  |
| Maximum total length of cables (km)                                                                                    | 450     |
| Maximum number of cable crossings                                                                                      | 20      |
| Maximum volume of cable protection (inter-array and interconnector) (m <sup>3</sup> )                                  | 852,600 |
| Maximum total seabed footprint area for cable protection (inter-array and interconnector) (m <sup>2</sup> )            | 548,800 |

### **Aviation safety**

3.—(1) The undertaker must exhibit such lights, with such shape, colour and character and at such times as are required by Air Navigation Order 2016 and/or determined necessary for aviation safety in consultation with the Defence Infrastructure Organisation Safeguarding and as directed by the Civil Aviation Authority. Lighting installed specifically to meet Ministry of Defence aviation safety requirements must remain operational for the life of the authorised development unless otherwise agreed with the Ministry of Defence.

(2) The undertaker must notify the Defence Infrastructure Organisation Safeguarding, at least 14 days prior to the commencement of the scheduled works, of the following—

- (a) the date of the commencement of construction of the scheduled works;
- (b) the date any wind turbine generators are brought into use;
- (c) the maximum height of any construction equipment to be used;
- (d) the maximum heights of any wind turbine generator, and offshore substation platform to be constructed;
- (e) the latitude and longitude of each wind turbine generator, and offshore substation platform to be constructed; and

the Defence Infrastructure Organisation Safeguarding must be notified of any changes to the information supplied under this paragraph and of the completion of the construction of the scheduled works.

(3) The lights installed in accordance with paragraph (1) will be operated at the lowest permissible lighting intensity level.

### **St Anne's and Lowther Hill Primary Surveillance Radar**

4.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until a primary radar mitigation scheme agreed in advance with the operator has been submitted to and approved in writing by the Secretary of State in order to avoid the impact of the development on the primary radar of the operator located at St Anne's and Lowther Hill Primary Surveillance Radar and associated air traffic management operations.

(2) No part of any wind turbine generator shall be erected until the approved primary radar mitigation scheme has been implemented and the authorised development then shall thereafter be operated fully in accordance with such approved scheme.

(3) For the purposes of this requirement:—

- (a) “operator” means NATS (En Route) plc, incorporated under the Companies Act (4129273) whose registered office is 4000 Parkway, Whiteley, Fareham, Hants PO15 7FL or such other organisation licensed from time to time under sections 5 and 6 of the Transport Act 2000 to provide air traffic services to the relevant managed area (within the meaning of section 40 of that Act); and
- (b) “primary radar mitigation scheme” or “scheme” means a detailed scheme agreed with the operator which sets out the measures to be taken to avoid at all times the impact of the

development on the St Anne's and Lowther Hill Primary Surveillance Radar and air traffic management operations of the operator.

#### **Air traffic services at Warton Aerodrome**

5.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until

- (a) an ATS mitigation scheme has been submitted to and approved in writing by the Secretary of State, in consultation with the CAA and the operator; and
- (b) the Secretary of State, following consultation with the CAA and the operator, has confirmed in writing that he/she is satisfied that the Approved ATS mitigation scheme has been implemented by the undertaker in accordance with sub-paragraph (4)(a) of this requirement.

(2) For the purposes of this requirement—

“Approved ATS mitigation scheme” means the ATS mitigation scheme as approved by the Secretary of State in accordance with sub-paragraph (1)(a).

“ATS mitigation scheme” means a scheme which is designed to prevent or remove any adverse impacts arising from the authorised development on the operation of Warton Aerodrome, including but not limited to:

- (i) the Aerodrome's ability to provide and deliver, on an uninterrupted basis
  - (aa) national sovereign defence capabilities;
  - (bb) safe airport operational and air traffic services that are fit for purpose for both civil and military aircraft operations; and
  - (cc) any other operational requirements which are identified by the operator; and
- (ii) the Aerodrome's IFP, MSA, DF, VHF and UHF communication systems;

“CAA” means the Civil Aviation Authority constituted by the Civil Aviation Act 1982;

“DF” means direction finding;

“IFP” means instrument flight procedures;

“MSA” means minimum sector altitude;

“operator” means BAE Systems (Operations) Limited (incorporated in England and Wales with company number 01996687, whose registered office is at Victory Point, Lyon Way, Frimley, Camberley, Surrey GU16 7EX) or such other organisation as is licensed from time to time under sections 5 and 6 of the Transport Act 2000 to provide air traffic services at Warton Aerodrome or any organisation employed by BAE Systems (Operations) Limited to provide an air traffic service at Warton Aerodrome;

“UHF” means ultra high frequency; and

“VHF” means very high frequency.

(3) The approved ATS mitigation scheme must remain in place and be complied with for the lifetime of the authorised development

(4) The undertaker shall, at its sole cost

- (a) implement the Approved ATS mitigation scheme prior to the erection of any part of any wind turbine generator forming part of the authorised development;
- (b) thereafter maintain, including without limitation resolving any failure (howsoever caused) of the Approved ATS mitigation scheme throughout the lifetime of the authorised development; and
- (c) in the event of any amendment being made to the authorised development which gives rise to adverse impacts on the operation of Warton Aerodrome which are materially new or materially different to those identified by the environmental statement, work with the CAA and the operator in good faith to implement and to thereafter maintain any

additional mitigation measures required to prevent or remove such adverse impacts throughout the lifetime of the authorised development.

#### **Warton Aerodrome Primary Surveillance Radar**

6.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until a radar mitigation scheme has been submitted to and approved in writing by the Secretary of State, in consultation with the MoD and the Operator.

(2) For the purposes of this requirement:—

“approved radar mitigation scheme” means the radar mitigation scheme as approved by the Secretary of State in accordance with sub-paragraph (1) of this requirement;

“MoD” means the Ministry of Defence as represented by Defence Infrastructure Organisation – Safeguarding, St George’s House, DIO Head Office, DMS, Whittington, Lichfield, Staffordshire WS14 9PY or any successor body;

“operator” means BAE Systems (Operations) Limited (incorporated in England and Wales with company number 01996687, whose registered office is at Victory Point, Lyon Way, Frimley, Camberley, Surrey GU16 7EX) or such other organisation as is licensed from time to time under sections 5 and 6 of the Transport Act 2000 to provide air traffic services at Warton Aerodrome or any organisation employed by BAE Systems (Operations) Limited to provide an air traffic service at Warton Aerodrome;

“PSR” means the Primary Surveillance Radar at Warton Aerodrome or any upgrade thereto or replacement thereof;

“PSR air traffic control operations” means the air traffic control operations, including both civil and military aircraft operations, of the MoD or the operator (or both) which are reliant upon the PSR; and

“radar mitigation scheme” means a scheme designed to prevent or remove any adverse impacts arising from the authorised development upon the operation of the PSR or PSR air traffic control operations.

(3) The Approved Radar Mitigation Scheme must remain in place and be complied with for the lifetime of the authorised development.

(4) No wind turbine generator erected as part of the authorised development shall be permitted to rotate its rotor blades about its horizontal axis other than for the purpose of testing the proposed mitigation solution identified in the approved radar mitigation scheme until the Secretary of State, following consultation with the MoD and the operator, has confirmed in writing that he/she is satisfied that:

- (a) the proposed mitigation solution has been subject to technical and operational assessment and, in particular, has undergone ‘in-situ’ testing in line with the requirements of (and for the time period(s) specified in) the approved radar mitigation scheme;
- (b) the performance criteria required to be met by the proposed mitigation solution, as specified in the approved radar mitigation scheme, have been met; and
- (c) the approved radar mitigation scheme has been implemented by the undertaker in accordance with sub-paragraph (4)(a) of this requirement.

(5) The undertaker shall, at its sole cost:

- (a) implement the approved radar mitigation scheme prior to any wind turbine generator forming part of the authorised development being permitted to rotate its rotor blades about its horizontal axis;
- (b) thereafter maintain, (including without limitation resolving any failure (howsoever caused) of the implemented mitigation solution (or any part thereof)) throughout the lifetime of the authorised development, provided that the PSR remains an operational requirement of the MoD or the Operator (or both); and
- (c) in the event of any amendment being made to the authorised development which gives rise to additional materially new or materially different adverse impacts (over and above

the impacts identified by the environmental statement) on the operation of the PSR or the PSR air traffic control operation (or both), work with the MoD and the operator in good faith to implement and to thereafter maintain any additional mitigation measures required to prevent or remove such adverse impacts for so long as any of the wind turbine generators forming part of the authorised development are operational and provided that the PSR remains an operational requirement of the MoD or the Operator (or both).

#### **Air traffic services at Walney Aerodrome**

7.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until:

- (a) an ATS mitigation scheme has been submitted to and approved in writing by the Secretary of State, in consultation with the CAA and the operator; and
- (b) the Secretary of State, following consultation with the CAA and the operator, has confirmed in writing that he/she is satisfied that the approved ATS mitigation scheme has been implemented by the undertaker in accordance with sub-paragraph (3)(a) of this requirement.

(2) For the purposes of this requirement—

“approved ATS mitigation scheme” means the ATS mitigation scheme as approved by the Secretary of State in accordance with sub-paragraph 1;

“ATS mitigation scheme” means a scheme which is designed to prevent or remove any adverse impacts arising from the authorised development on the operation of Walney Aerodrome, including but not limited to:

- (a) the Aerodrome’s ability to provide and deliver, on an uninterrupted basis
  - (i) national sovereign defence capabilities;
  - (ii) safe airport operational and air traffic services that are fit for purpose for both civil and military aircraft operations; and
  - (iii) any other operational requirements which are identified by the operator; and
- (b) the Aerodrome’s IFP, MSA and VHF communication systems, such scheme to remain in place throughout the lifetime of the authorised development and for so long as any part of the authorised development remains in situ;

“CAA” means the Civil Aviation Authority constituted by the Civil Aviation Act 1982;

“IFP” means instrument flight procedures;

“MSA” means minimum sector altitude;

“operator” means BAE Systems Marine Limited (incorporated in England and Wales with company number 00229770, whose registered office is at Victory Point, Lyon Way, Frimley, Camberley, Surrey GU16 7EX) or such other organisation as is licensed from time to time under sections 5 and 6 of the Transport Act 2000 to provide air traffic services at Walney Aerodrome or any organisation employed by BAE Systems Marine Limited to provide an air traffic service at Walney Aerodrome; and

“VHF” means very high frequency.

(3) The Approved ATS Mitigation Scheme must remain in place and be complied with for the lifetime of the authorised development.

(4) The undertaker shall, at its sole cost –

- (a) implement the approved ATS mitigation scheme prior to the erection of any part of any wind turbine generator forming part of the authorised development;
- (b) thereafter maintain, including without limitation resolving any failure (howsoever caused) of the approved ATS mitigation scheme throughout the lifetime of the authorised development; and
- (c) in the event of any amendment being made to the authorised development which gives rise to adverse impacts on the operation of Walney Aerodrome which are materially new

or materially different to those identified by the environmental statement, work with the CAA and the operator in good faith to implement and to thereafter maintain any additional mitigation measures required to prevent or remove such adverse impacts throughout the lifetime of the authorised development.

#### **Air traffic services at Isle of Man Airport**

8.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until the Secretary of State, having consulted with the operator and the Isle of Man Civil Aviation Administration, confirms in writing that either—

- (a) no appropriate mitigation is required in respect of the authorised development; or
- (b) an appropriate mitigation scheme will be implemented and maintained for the life of the authorised development.

(2) For the purposes of this requirement—

“appropriate mitigation scheme” means a scheme agreed with the operator which sets out measures taken to prevent or remove any adverse impacts of the authorised development on the Isle of Man Primary Surveillance Radar and air traffic management operations and the operator’s ability to provide safe and efficient air traffic services for Isle of Man Airport during the life of the authorised development; and

“operator” means Isle of Man Airport or such other organisation as is licensed from time to time to provide air traffic services for Isle of Man Airport.

(3) The undertaker shall thereafter comply with all obligations contained within the approved mitigation for the life of the authorised development.

#### **Operation of Blackpool Airport**

9.—(1) No part of any wind turbine generator shall be erected as part of the authorised development until the Secretary of State, having consulted with the Operator and the Civil Aviation Authority, confirms in writing that it is satisfied that—

- (a) appropriate mitigation will be implemented and maintained throughout the lifetime of the authorised development; and
- (b) appropriate arrangements have been put in place with the operator to ensure that such appropriate mitigation is so implemented prior to construction of any wind turbine generator and thereafter maintained.

(2) For the purposes of this requirement—

“appropriate mitigation” means measures to prevent or remove any adverse impacts which the authorised development will have on the ability of the operator to provide safe airport operational and air traffic services (including but not limited to any adverse impacts on instrument flight procedures, minimum sector altitudes, and very high frequency radio and direction finding communication systems) for Blackpool Airport;

“approved mitigation” means the appropriate mitigation agreed with the operator and confirmed by the Secretary of State in accordance with sub-paragraph (1); and

“operator” means Blackpool Airport Operations Limited (incorporated in England and Wales with company number 09307995 and whose registered office is Number One Bickerstaffe Square, Talbot Road, Blackpool, FY1 3AH), or such other organisation as is licensed from time to time under sections 5 and 6 of the Transport Act 2000 to provide air traffic services for Blackpool Airport; and

“VHF” means very high frequency.

(3) The undertaker shall thereafter comply with all obligations contained within the approved appropriate mitigation for the lifetime of the authorised development.

## **Decommissioning**

10. No works may commence until a written decommissioning programme in compliance with any notice served upon the undertaker by the Secretary of State pursuant to section 105(2) (requirement to prepare decommissioning programmes) of the 2004 Act has been submitted to the Secretary of State.

## **Requirement for written approval**

11. Where under any of the above requirements the approval or agreement of the Secretary of State or another person is required, that approval or agreement must be given in writing.

## **Amendments to approved details**

12. With respect to any requirement which requires the authorised project to be carried out in accordance with the details approved under this Schedule, the approved details are taken to include any amendments that may subsequently be approved or agreed by the Secretary of State, or another person.

# **SCHEDULE 3**

Article 5

## **Deemed Marine Licence under the 2009 Act – Licence 1: Wind Turbine Generators and Associated Infrastructure**

### **PART 1**

#### **Licensed marine activities**

## **Interpretation**

1.—(1) In this licence—

“1989 Act” means the Electricity Act 1989(a);

“2004 Act” means the Energy Act 2004(b);

“2008 Act” means the Planning Act 2008(c);

“2009 Act” means the Marine and Coastal Access Act 2009(d);

“Annex I reef” means a reef of a type listed in Annex I to Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora;

“address” includes any number or address used for the purposes of electronic transmission;

“ancillary works” means the ancillary works described in Part 2 of Schedule 1 (ancillary works) and any other works authorised by this Order that are not development within the meaning of section 32 of the 2008 Act;

“authorised deposits” means the substances and articles specified in paragraph 4 of Part 1 of this licence;

“authorised scheme” means Work No. 1, Work No.2 and Work No. 3 and the further associated development described in paragraph 3 of Part 1 of this licence or any part of that work or development;

---

(a) 1989 c.29.

(b) 2004 c.20.

(c) 2008 c.29.

(d) 2009 c.23.



“bank holiday” means a bank holiday in England and Wales under section 1 of the Banking and Financial Dealings Act 1971(a);

“buoy” means any floating device used for navigational purposes or measurement purposes, including but not limited to wave buoys, LiDAR and guard buoys;

“cable” means up to 400kV cables for the transmission of electricity and includes fibre optic and other communications cables either within the cable or laid alongside;

“cable crossings” means the crossing of sub-sea cables, pipelines or other existing infrastructure by the cables (including inter-array cables) authorised by this Order together with cable protection;

“cable protection” means measures to protect cables from physical damage including but not limited to concrete mattresses, with or without frond devices, and/or rock placement, the use of bagged solutions filled with grout or other materials;

“chemicals” comprise both substances and preparations;

“commence” means the first carrying out of any licensed activities, save for pre-construction surveys, monitoring surveys, unexploded ordnance surveys and clearance of low order unexploded ordnance, and “commenced” and “commencement” must be construed accordingly;

“commercial operation” means in relation to any part of the authorised scheme, the exporting, transmission or conversion, on a commercial basis, of electricity;

“condition” means a condition in part 2 of this licence;

“electronic transmission” means a communication transmitted—

(a) by means of an electronic communications network; or

(b) by other means but while in electronic form;

“environmental statement” means the document certified as the environmental statement by the Secretary of State under article 11 (certification of plans, etc.) of the Order;

“foundation” means any of: a multi-leg pin-piled jacket, multi-leg suction bucket jacket, or gravity base foundation;

“gravity base foundation” means a structure principally of steel, concrete, or steel and concrete with a base which rests on the seabed either due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“HAT” means highest astronomical tide;

“high order unexploded ordnance clearance” means an unexploded ordnance clearance method which intentionally seeks to detonate the unexploded ordnance;

“inter-array cables” means the cables linking the wind turbine generators to each other and to the offshore substation platforms;

“interconnector cables” means the cables linking the offshore substation platforms to each other;

“intrusive activities” means activities including anchoring of vessels, jacking up of vessels, temporary deposits and temporary wet storage areas;

“jacket foundation” means a steel jacket/lattice-type structure constructed principally of steel, fixed to the seabed with pin-piles or steel suction buckets and associated equipment including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“km” means kilometres;

“LAT” means lowest astronomical tide;

“layout principles” means the layout principles contained within Table 3.7 of the environmental statement project description referred to as document S\_D6\_15 in Schedule 5;

---

(a) 1971 c.80.

“LiDAR” means a light detection and ranging system used to measure weather and sea conditions;

“licence 2” means the marine licence set out in Schedule 4 (Deemed marine licence under the 2009 Act – Licence 2: Offshore Substation Platforms and Interconnector Cables);

“licenced activities” means those activities specified in Part 1 of this licence;

“low order unexploded ordnance clearance” means an unexploded ordnance clearance method which does not seek to detonate the unexploded ordnance;

“m” means metres and “m<sup>2</sup>” means metres squared;

“maintain” includes inspect, upkeep, repair, adjust or alter the authorised scheme, and remove, reconstruct or replace any part of the authorised scheme, to the extent assessed in the environmental statement; and any derivative of “maintain” is to be construed accordingly;

“Marine Management Organisation” means the body created under the 2009 Act which is responsible for the regulation of this licence or any successor of that function and “MMO” must be construed accordingly;

“MCA” means the Maritime and Coastguard Agency, the executive agency of the Department for Transport;

“MCMS” means the Marine Case Management System web portal provided and operated by the MMO;

“measures to minimise disturbance to marine mammals and rafting birds from transiting vessels” means the document certified as the measures to minimise disturbance to marine mammals and rafting birds from transiting vessels by the Secretary of State under article 11 (certification of plans, etc.) for the purposes of this Order;

“offshore in principle monitoring plan” means the document certified as the offshore in principle monitoring plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“offshore order limits and grid coordinates plan” means the document certified as the offshore order limits and grid coordinates plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“offshore substation platform” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and open with modular equipment or fully clad, containing—

(c) electrical equipment required to switch, transform or convert electricity generated at the wind turbine generators to a higher voltage and provide reactive power compensation, including high voltage power transformers, high voltage switchgear and busbars, substation auxiliary systems and low voltage distribution, instrumentation, metering equipment and control systems, standby generators, shunt reactors, auxiliary and uninterruptible power supply systems; and

(d) accommodation, storage, workshop auxiliary equipment and facilities for operating, maintaining and controlling the substation or wind turbine generators, including navigation, aviation and safety marketing and lighting, systems for vessel charging, access and retrieval, cranes, potable water supply, black water separation, stores, fuels and spares, communications systems and control hub facilities and other associated equipment and facilities;

“offshore surface structures” means offshore substation platforms and wind turbine generators;

“Order” means the Morgan Offshore Wind Project: Generation Assets Order 202[•];

“Order limits” means the limits shown on the offshore order limits and grid coordinates plan within which the authorised scheme may be carried out;

“outline environmental management plan” plan means the document certified as the outline environmental management plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline fisheries liaison and co-existence plan” plan means the document certified as the outline fisheries liaison and co-existence plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline marine mammal mitigation protocol” means the document certified as the outline marine mammal mitigation protocol by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore construction method statement” means the document certified as the outline offshore construction method statement by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore written scheme of investigation for archaeology” plan means the document certified as the outline offshore written scheme of investigation for archaeology by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore operations and maintenance plan” plan means the document certified as the outline offshore operations and maintenance plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline underwater sound management strategy” means the document certified as the outline underwater sound management strategy by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline vessel traffic management plan” means the document certified as the outline vessel traffic management plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“operation” means the undertaking of activities authorised by this Order which are not part of the construction, commissioning or decommissioning of the authorised development;

“pathway to the marine environment” means open systems or closed systems that require top up;

“pin-piles” means steel or concrete cylindrical piles driven and/or drilled into the seabed to secure jacket foundations;

“preparation” means a mixture or solution composed of two or more substances;

“scour protection” means measures to prevent loss of seabed sediment around any structure placed in or on the seabed including by the use of bagged solutions, filled with grout or other materials, protective aprons, mattresses with or without frond devices and rock and gravel placement;

“substance” means a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition;

“suction bucket foundation” means a tubular steel structure which partially or fully penetrates the seabed and associated equipment, including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“statutory historic body” means an organisation charged by the government with advising on matters related to historic buildings and monuments;

“statutory nature conservation body” means an organisation charged by the government with advising on nature conservation matters;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“UKHO” means the United Kingdom Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

“undertaker” means Morgan Offshore Wind Limited (company registration number: 13497271) whose registered office address is Chertsey Road, Sunbury on Thames, Middlesex, United Kingdom, TW16 7BP;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil

vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“wind turbine generator” means a structure comprising a tower, rotor with three blades connected at the hub, nacelle and ancillary electrical and other equipment which may include J-tube(s), transition piece, access and rest platforms, access ladders, boat access systems, corrosion protection systems, fenders and maintenance equipment, helicopter landing facilities and other associated equipment including communications equipment, fixed to a foundation or transition piece;

“works plan” means the plans certified as the works plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order.

(2) In this licence a reference to any statute, order, regulation or similar instrument is a reference to a statute, order, regulation or instrument as amended by any subsequent statute, order, regulation or instrument or as contained in any subsequent re-enactment.

(3) In this licence, unless otherwise indicated—

(a) all times are Greenwich Mean Time (“GMT”); and

(b) all coordinates are latitude and longitude degrees and minutes to two decimal places.

(4) Unless otherwise stated or agreed with the MMO, all notifications must be sent by the undertaker to the MMO using MCMS. Except where otherwise notified in writing by the relevant organisation, the addresses for correspondence for the purposes of this Schedule are—

(a) Centre for Environment, Fisheries and Aquaculture Science

Pakefield Road

Lowestoft

Suffolk

NR33 0HT

Tel: 01502 562 244

(b) Historic England

4th Floor

Cannon Bridge House

25 Dowgate Hill

London

EC4R 2YA.

Tel: 0161 421 416

Email: [northwest@historicengland.org.uk](mailto:northwest@historicengland.org.uk)

(c) Marine Management Organisation

Marine Licensing Team

Lancaster House

Hampshire Court

Newcastle upon Tyne

NE4 7YH

Tel: 0300 231 1032

Email: [marine.consents@marinemangement.org.uk](mailto:marine.consents@marinemangement.org.uk)

(d) Marine Management Organisation (local office)

Lutra House

Dodd Way

Walton Summit

- Preston  
PR5 8BX  
Tel: 02080 265 643  
Email: preston@marinemanagement.org.uk
- (e) Marine Management Organisation  
Marine Pollution Response Team  
Tel. (during office hours): 03008 002 024,  
Tel. (outside office hours): 07770 977 825 or 0845 051 8486
- (f) Maritime and Coastguard Agency  
UK Technical Services Navigation  
Spring Place  
105 Commercial Road  
Southampton  
SO15 1EG  
Email: navigationsafety@mcga.gov.uk
- (g) Natural England  
Foss House  
Kings Pool  
1-2 Peasholme Green  
York  
YO1 7PX  
Tel: 03000 604 911
- (h) Trinity House  
Tower Hill  
London  
EC3N 4DH  
Tel: 020 7481 6900
- (i) United Kingdom Hydrographic Office  
Admiralty Way  
Taunton  
Somerset  
TA1 2DN  
Tel: 01823 337 900

### **Details of licensed marine activities**

2. Subject to the conditions, this licence authorises the undertaker (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities under section 66(1) (licensable marine activities) of the 2009 Act—

- (a) the deposit at sea of the substances and objects specified in paragraph 4 below;
- (b) the construction of works in or over the sea or on or under the seabed;
- (c) dredging for the purposes of seabed preparation for foundation works or cable works;
- (d) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;

- (e) site clearance and preparation works including clearance of debris, boulder clearance and the removal of out of service cables and static fishing equipment;
- (f) low order unexploded ordnance clearance;
- (g) the use of extracted seabed material within gravity base foundations; and
- (h) the disposal of up to 15,694,606 cubic metres of inert material of natural origin within the Order limits produced during construction drilling or seabed preparation for foundation works, cable works and boulder clearance works at disposal site reference IS155 within the extent of the Order limits seaward of MHWS, unless otherwise agreed in writing with the MMO.

3. Such activities are authorised in relation to the construction, maintenance and operation of the authorised scheme being—

*Work No. 1*— an offshore wind generating station comprising:

- (a) up to 96 wind turbine generators; and
- (b) a network of subsea inter-array cables between the wind turbine generators including cable crossings and cable protection;

*Work No. 2*—up to four offshore substation platforms (all or any of which may alternatively be constructed under licence 2); and

*Work No. 3*—a network of subsea interconnector cables between the offshore substation platforms including cable crossings and cable protection (which may alternatively be constructed under licence 2).

In connection with the licenced activities in Work Nos. 1 to 3 and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised scheme and which fall within the scope of the work assessed by the environmental statement, including—

- (c) scour protection around the foundations of the offshore structures;
- (d) cable protection measures such as rock placement and the placement of rock and/or concrete mattresses, with or without frond devices;
- (e) dredging;
- (f) the removal of material from the seabed and the disposal of inert material of natural origin and/or dredged material within the Order limits produced during construction drilling and seabed preparation for foundation works, cable installation preparation such as sandwave clearance, boulder clearance and pre-trenching; and
- (g) creation and use of temporary vessel laydown areas and use of cable anchors;
- (h) temporary landing places, moorings or other means of accommodating vessels in the construction or maintenance of the authorised scheme;
- (i) removal of static fishing equipment;
- (j) the use of extracted seabed material within gravity base foundations;
- (k) lighting; and
- (l) buoys, beacons, fenders and other navigational warning or ship impact protection works.

4. The substances and objects authorised for deposit at sea are—

- (a) iron, steel, copper and aluminium;
- (b) stone and rock;
- (c) concrete and grout;
- (d) sand and gravel;
- (e) plastic and synthetic;
- (f) material extracted from within the Order limits during construction drilling or seabed preparation for foundation works and cable sandwave preparation works; and

(g) marine coatings, other chemicals and timber.

5. The grid coordinates for Work No.1, Work No.2 and Work No.3 are as shown on the order limits and grid coordinates plan and as specified below—

| <i>Point</i> | <i>Latitude</i>   | <i>Longitude</i> |
|--------------|-------------------|------------------|
| 1            | 53° 54' 27.788" N | 3° 58' 8.915" W  |
| 2            | 53° 54' 41.257" N | 3° 58' 42.184" W |
| 3            | 53° 57' 6.032" N  | 4° 3' 55.525" W  |
| 4            | 53° 57' 7.936" N  | 4° 4' 25.017" W  |
| 5            | 53° 57' 13.636" N | 4° 5' 53.497" W  |
| 6            | 53° 58' 7.549" N  | 4° 7' 48.094" W  |
| 7            | 54° 0' 28.539" N  | 4° 12' 48.480" W |
| 8            | 54° 0' 33.128" N  | 4° 12' 41.699" W |
| 9            | 54° 0' 39.541" N  | 4° 12' 32.331" W |
| 10           | 54° 0' 49.220" N  | 4° 12' 18.682" W |
| 11           | 54° 0' 58.979" N  | 4° 12' 5.399" W  |
| 12           | 54° 1' 0.852" N   | 4° 12' 2.795" W  |
| 13           | 54° 1' 10.663" N  | 4° 11' 49.441" W |
| 14           | 54° 1' 20.488" N  | 4° 11' 36.537" W |
| 15           | 54° 1' 26.187" N  | 4° 11' 24.779" W |
| 16           | 54° 1' 31.886" N  | 4° 11' 13.315" W |
| 17           | 54° 1' 33.367" N  | 4° 11' 10.387" W |
| 18           | 54° 1' 34.438" N  | 4° 11' 8.270" W  |
| 19           | 54° 1' 39.125" N  | 4° 10' 59.214" W |
| 20           | 54° 1' 41.978" N  | 4° 10' 53.701" W |
| 21           | 54° 1' 42.739" N  | 4° 10' 52.231" W |
| 22           | 54° 1' 47.148" N  | 4° 10' 43.936" W |
| 23           | 54° 1' 48.940" N  | 4° 10' 40.404" W |
| 24           | 54° 1' 57.247" N  | 4° 10' 24.352" W |
| 25           | 54° 2' 5.706" N   | 4° 10' 8.569" W  |
| 26           | 54° 2' 11.564" N  | 4° 9' 57.954" W  |
| 27           | 54° 2' 14.425" N  | 4° 9' 52.857" W  |
| 28           | 54° 2' 14.433" N  | 4° 9' 52.843" W  |
| 29           | 54° 2' 14.446" N  | 4° 9' 52.820" W  |
| 30           | 54° 2' 23.202" N  | 4° 9' 37.580" W  |
| 31           | 54° 2' 23.221" N  | 4° 9' 37.547" W  |
| 32           | 54° 2' 23.229" N  | 4° 9' 37.534" W  |
| 33           | 54° 2' 23.238" N  | 4° 9' 37.518" W  |
| 34           | 54° 2' 23.239" N  | 4° 9' 37.517" W  |
| 35           | 54° 2' 32.133" N  | 4° 9' 22.564" W  |
| 36           | 54° 2' 32.146" N  | 4° 9' 22.542" W  |
| 37           | 54° 2' 32.159" N  | 4° 9' 22.521" W  |
| 38           | 54° 2' 32.166" N  | 4° 9' 22.509" W  |
| 39           | 54° 2' 32.172" N  | 4° 9' 22.500" W  |
| 40           | 54° 2' 41.223" N  | 4° 9' 7.804" W   |
| 41           | 54° 2' 41.236" N  | 4° 9' 7.782" W   |
| 42           | 54° 2' 41.249" N  | 4° 9' 7.761" W   |
| 43           | 54° 2' 41.257" N  | 4° 9' 7.749" W   |
| 44           | 54° 2' 41.263" N  | 4° 9' 7.739" W   |
| 45           | 54° 2' 50.489" N  | 4° 8' 53.271" W  |



|    |                   |                  |
|----|-------------------|------------------|
| 46 | 54° 2' 59.863" N  | 4° 8' 39.076" W  |
| 47 | 54° 3' 9.407" N   | 4° 8' 25.119" W  |
| 48 | 54° 3' 19.079" N  | 4° 8' 11.466" W  |
| 49 | 54° 3' 28.890" N  | 4° 7' 58.099" W  |
| 50 | 54° 3' 38.836" N  | 4° 7' 45.024" W  |
| 51 | 54° 3' 48.923" N  | 4° 7' 32.234" W  |
| 52 | 54° 3' 52.208" N  | 4° 7' 28.172" W  |
| 53 | 54° 3' 56.043" N  | 4° 7' 23.528" W  |
| 54 | 54° 3' 59.107" N  | 4° 7' 19.782" W  |
| 55 | 54° 3' 59.122" N  | 4° 7' 19.764" W  |
| 56 | 54° 3' 59.130" N  | 4° 7' 19.754" W  |
| 57 | 54° 4' 1.160" N   | 4° 7' 17.353" W  |
| 58 | 54° 4' 1.181" N   | 4° 7' 17.328" W  |
| 59 | 54° 4' 6.734" N   | 4° 7' 10.779" W  |
| 60 | 54° 4' 7.781" N   | 4° 7' 9.560" W   |
| 61 | 54° 4' 9.456" N   | 4° 7' 7.587" W   |
| 62 | 54° 4' 13.935" N  | 4° 7' 2.501" W   |
| 63 | 54° 4' 16.028" N  | 4° 7' 0.112" W   |
| 64 | 54° 4' 18.943" N  | 4° 6' 56.806" W  |
| 65 | 54° 4' 19.913" N  | 4° 6' 55.716" W  |
| 66 | 54° 4' 24.700" N  | 4° 6' 50.475" W  |
| 67 | 54° 4' 30.489" N  | 4° 6' 44.156" W  |
| 68 | 54° 4' 35.097" N  | 4° 6' 39.269" W  |
| 69 | 54° 4' 40.000" N  | 4° 6' 34.145" W  |
| 70 | 54° 4' 41.189" N  | 4° 6' 32.904" W  |
| 71 | 54° 4' 45.972" N  | 4° 6' 28.021" W  |
| 72 | 54° 3' 42.182" N  | 4° 0' 24.131" W  |
| 73 | 54° 0' 25.772" N  | 3° 53' 55.337" W |
| 74 | 53° 58' 34.172" N | 3° 47' 19.232" W |
| 75 | 53° 56' 34.760" N | 3° 47' 14.121" W |

6. This marine licence remains in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 (approval of decommissioning programmes) of the 2004 Act including any modification to the programme under section 108 (reviews and revisions of decommissioning programmes) of the 2004 Act, and the completion of such programme has been confirmed by the Secretary of State in writing.

7. The provisions of section 72 (variation, suspension, revocation and transfer) of the 2009 Act apply to this licence except that the provisions of section 72(7) and (8) relating to the transfer of the licence apply only to a transfer not falling within article 7 (benefit of order) of the Order.

8. With respect to any condition which requires the licensed activities be carried out in accordance with the details, plans or schemes approved under this licence, the approved details, plans or schemes are taken to include any amendments that may subsequently be approved in writing by the MMO.

9. Any amendments to or variations from the approved details, plans or schemes must be in accordance with the principles and assessments set out in the environmental statements. Such agreement may only be given where it has been demonstrated to the satisfaction of the MMO that it is unlikely to or will not give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

## PART 2

### Conditions

#### Design parameters

10. —(1) The authorised scheme must be constructed in accordance with the parameters assessed in the environmental statement and set out in Table 2.

(2) References to the location of an offshore surface structure in Table 2 is a reference to the centre point of that structure.

**Table 2**

| <i>Parameter</i>                                                                                                       | <i>Value</i> |
|------------------------------------------------------------------------------------------------------------------------|--------------|
| Maximum number of wind turbine generators                                                                              | 96           |
| Maximum height of wind turbine generators when measured from LAT to the tip of the vertical blade (m)                  | 364          |
| Maximum rotor diameter of each wind turbine generator (m)                                                              | 320          |
| Maximum rotor swept area (m <sup>2</sup> )                                                                             | 5,468,884    |
| Minimum distance from LAT to the lowest point of the rotating blade for each turbine (m)                               | 34           |
| Minimum distance from HAT to the lowest point of the rotating blade for each turbine (m)                               | 26           |
| Minimum distance between offshore surface structures (in all directions) (m)                                           | 1,400        |
| Maximum diameter of pin-piles for wind turbine generators on jacket pin-pile foundations (m)                           | 5.5          |
| Maximum diameter of gravity base at the seabed for wind turbine generators on gravity base foundations (m)             | 49           |
| Maximum diameter of buckets for wind turbine generators on suction bucket jackets (m)                                  | 18           |
| Maximum diameter of pin-piles for offshore substation platforms on jacket pin-pile foundations (m)                     | 5.5          |
| Maximum diameter of gravity base at the seabed for offshore substation platforms on gravity base foundations (m)       | 80           |
| Maximum diameter of buckets for offshore substation platforms on suction bucket jackets (m)                            | 18           |
| Maximum number of wind turbines on jacket driven pin-pile foundations                                                  | 64           |
| Maximum volume of extracted seabed material to be used in gravity base foundations (m <sup>3</sup> )                   | 490,000      |
| Maximum total seabed footprint of wind turbine generators (including scour protection) (m <sup>2</sup> )               | 735,488      |
| Maximum volume of scour protection for wind turbine generators (m <sup>3</sup> )                                       | 1,701,998    |
| Maximum volume of scour protection for offshore substation foundations (m <sup>3</sup> )                               | 58,361       |
| Maximum number of offshore substation platforms                                                                        | 4            |
| Maximum dimensions of offshore substations (excluding towers, helipads, masts, and cranes):                            |              |
| (a) Height when measured from LAT (m)                                                                                  | 70           |
| (b) Length (m)                                                                                                         | 80           |
| (C) Width (m)                                                                                                          | 60           |
| Maximum total seabed footprint area for offshore substation foundations (including scour protection) (m <sup>2</sup> ) | 24,964       |
| Maximum total length of cables (inter-array and interconnector) (km)                                                   | 450          |

|                                                                                          |         |
|------------------------------------------------------------------------------------------|---------|
| Maximum number of cable crossings (inter-array and interconnector)                       | 20      |
| Maximum volume of cable protection (inter-array and interconnector)<br>(m <sup>3</sup> ) | 852,600 |
| Maximum total seabed footprint area for cable protection (m <sup>2</sup> )               | 548,800 |

11. The total number of offshore substation platforms forming part of the authorised scheme in this licence and the authorised scheme in licence 2 taken together must not exceed four (whether constructed under this licence or licence 2).

12. The total length of interconnector cables forming part of the authorised scheme in this licence and the authorised scheme in licence 2 taken together must not exceed 60 kilometres (whether constructed under this licence or licence 2).

### **Maintenance of the authorised scheme**

13. —(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.

(2) Maintenance works include but are not limited to—

- (a) major wind turbine component or offshore substation platform replacement;
- (b) painting and applying other coatings to wind turbine generators or offshore substation platforms;
- (c) bird waste and marine growth removal;
- (d) cable remedial burial;
- (e) cable repairs and replacement;
- (f) access ladder and boat landing replacement;
- (g) wind turbine generator and offshore substation platform anode replacement; and
- (h) J-tube repair/replacement.

(3) An operations and maintenance plan in accordance with the outline offshore operations and maintenance plan must be submitted to the MMO for approval in writing at least six months prior to commencement of the operation of licensed activities and must provide for review and resubmission every three years during the operational phase.

(4) All operation and maintenance activities must be carried out in accordance with the plan approved under sub-paragraph (3).

(5) An annual maintenance report must be submitted to the MMO in writing within one month following the first anniversary of the date of commencement of operations, and every year thereafter until the permanent cessation of operation.

(6) The annual maintenance report in sub-paragraph (5) must provide a record of the licenced activities during the preceding year, the timing of activities and methodologies used.

(7) Unless otherwise agreed in writing with the MMO, every fifth year the undertaker must submit to the MMO in writing, within one month of that date, a consolidated maintenance report which will—

- (a) Include a review of licenced activities undertaken during the preceding five years with reference to the reports submitted in accordance with sub-paragraph (5) of this licence; and
- (b) Reconfirm the applicability of the methodologies and frequencies of the licensable activities permitted by this licence for the remaining duration of this licence.

### **Extension of time periods**

14. Any time period given in this licence to either the undertaker or the MMO may be extended with the agreement of the other party such agreement not to be unreasonably withheld or delayed.

## Notifications and inspections

- 15.—(1) The undertaker must ensure that—
- (a) a copy of this licence (issued as part of the grant of the Order) and any subsequent amendments or revisions to it is provided to—
    - (i) all agents and contractors notified to the MMO in accordance with condition 26;
    - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 26;
  - (b) within 28 days of receipt of a copy of this licence those persons referred to in paragraph (a) must confirm receipt of this licence in writing to the MMO.
- (2) Only those persons and vessels notified to the MMO in accordance with condition 26 are permitted to carry out the licensed activities.
- (3) Copies of this licence must also be available for inspection at the following locations—
- (a) the undertaker's registered address;
  - (b) any site office located at or adjacent to the construction site and used by the undertaker or its agents and contractors responsible for the loading, transportation or deposit of the authorised deposits; and
  - (c) on board each vessel and at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.
- (4) The documents referred to in sub-paragraph (1)(a) must be available for inspection by an authorised enforcement officer at the locations set out in sub-paragraph (3)(b).
- (5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during the construction and operation of the authorised scheme.
- (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 and within five days of the completion of the licensed activity.
- (7) The Kingfisher Information Service of Seafish must be informed of details of the vessel routes, timings and locations relating to the construction of the authorised scheme or part thereof by including the information in a notice via their portal (<https://kingfisherbulletin.org/submit-notice>) and by email to [kingfisher@seafish.co.uk](mailto:kingfisher@seafish.co.uk) —
- (a) at least 14 days prior to the commencement of offshore activities, for inclusion in the Kingfisher Fortnightly Bulletin and offshore hazard awareness data; and
  - (b) as soon as reasonably practicable and no later than 24 hours after completion of the authorised scheme
- and confirmation of notification must be provided to the MMO within five days.
- (8) The undertaker must ensure that a local notification to mariners is issued at least 14 days prior to the commencement of the authorised scheme or any part thereof advising of the start date and the expected vessel routes from the construction ports to the relevant location. Copies of all notices must be provided to the MMO, MCA Trinity House and UKHO within five days.
- (9) The undertaker must ensure that local notifications to mariners are updated and reissued at weekly intervals during construction activities and at least five days before any planned operations and maintenance works (or otherwise agreed) and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction programme and monitoring plan approved under conditions 20(1)(b) and 20(1)(c). Copies of all notices must be provided to the MMO and UKHO within five days.
- (10) The undertaker must notify UKHO of completion (within 14 days) of the authorised scheme or any part thereof in order that all necessary amendments are made to nautical charts. Copies of all notices must be provided to the MMO and MCA within five days.

(11) In case of damage to, or destruction or decay of, the authorised scheme or any part thereof, excluding the exposure of cables and faults, the undertaker must as soon as reasonably practicable and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify the MMO, MCA, Trinity House, the Kingfisher Information Service of Seafish, regional fisheries contact and UKHO.

(12) In case of buried cables becoming exposed on or above the seabed, the undertaker must within three days following identification of a cable exposure, notify mariners regional fisheries contact and the Kingfisher Information Service of Seafish of the location and extent of exposure. Copies of all notices must be provided to the MMO, MCA, Trinity House, and UKHO within five days.

(13) The undertaker must ensure that the MMO, the MMO Local Office, local fishermen's organisations, and the Source Data Receipt Team at the UKHO Taunton, Somerset, TA1 2DN (sdr@ukho.gov.uk) are notified within five days of each instance of cable repair, replacement or protection replenishment activity.

### **Aids to navigation**

16.—(1) The undertaker must during the period from commencement of construction of the authorised scheme to completion of decommissioning exhibit such lights, marks, sounds, signals and other aids to navigation, and take such other steps for the prevention of danger to navigation, as Trinity House may from time to time direct.

(2) The undertaker must during the period from commencement of construction of the authorised scheme to completion of decommissioning keep Trinity House and the MMO informed of progress of the authorised scheme including—

- (a) notice of commencement of construction of the authorised scheme within 24 hours of commencement having occurred;
- (b) notice within 24 hours of any aids to navigation being established by the undertaker; and
- (c) notice within five days of completion of construction of the authorised scheme.

(3) The undertaker must provide reports to Trinity House on the availability of aids to navigation in accordance with the frequencies set out in the aids to navigation management plan agreed pursuant to condition 20 (1)(f) using the reporting system provided by Trinity House.

(4) The undertaker must during the period from commencement of construction of the authorised scheme to completion of decommissioning notify Trinity House and the MMO of any failure of the aids to navigation and the timescales and plans for remedying such failures, as soon as possible and no later than 24 hours following the undertaker becoming aware of any such failure.

(5) In the event that the provisions of condition 15(11) are invoked, the undertaker must lay down such buoys, exhibit such lights and take such other steps for preventing danger to navigation as directed by Trinity House.

### **Colouring of structures**

17. Except as otherwise required by Trinity House the undertaker must paint all structures forming part of the authorised scheme yellow (colour code RAL 1023) from at least HAT to a height as directed by Trinity House. Unless the MMO otherwise directs, the undertaker must paint the remainder of the structures grey (colour code RAL 7035).

### **Chemicals, drilling and debris**

18.—(1) The undertaker must ensure that any coatings and treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by the Health and Safety Executive and the Environment Agency Pollution Prevention Control Guidelines.

(2) The storage, handling, transport and use of fuels, lubricants, chemicals and other substances must be undertaken so as to prevent releases into the marine environment, including bunding of 110 percent of the total volume of all reservoirs and containers.

(3) The undertaker must inform the MMO in writing of the location and quantities of material disposed of each month under this licence by submission of a disposal return by 15 February each year for the months August to January inclusive, and by 15 August each year for the months February to July inclusive.

(4) 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 disposal site reference IS155 within the extent of the Order limits seaward of MHWS. Any other materials must be screened out before disposal of the inert material at this site.

(5) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source, free from contaminants and containing minimal fines.

(6) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost within the Order limits, the undertaker must report the loss in writing to the local enforcement office within 48 hours and if the MMO reasonably considers such material to constitute a navigation or environmental hazard (dependent on the size and nature of the material) the undertaker must, in that event, demonstrate to the MMO that reasonable attempts have been made to locate, remove or move any such material.

(7) The undertaker must ensure that no waste concrete slurry or wash water from concrete or cement works are discharged into the marine environment. Concrete and cement mixing and washing areas must be contained to prevent run off entering the water through the freeing ports.

(8) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO Marine Pollution Response Team in accordance with the marine pollution contingency plan agreed under condition 20(1)(e).

(9) Debris or dropped objects which are considered a danger or hazard to navigation must be reported as soon as reasonably practicable but no later than six hours from the undertaker becoming aware of an incident, to the relevant HM Coastguard Maritime Rescue Co-ordination Centre by telephone (0344 382 0570), and the UK Hydrographic Office email: [navwarnings@btconnect.com](mailto:navwarnings@btconnect.com).

(10) All dropped objects including those in condition 18(9), must be reported to the MMO using the dropped object procedure form (including any updated form as provided by the MMO) as soon as reasonably practicable and in any event within 24 hours of the undertaker becoming aware of an incident, unless otherwise agreed in writing with the MMO.

(11) On receipt of notification of the dropped object procedure form the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the marine environment at the undertaker's expense if reasonable to do so.

### **Force Majeure**

19.—(1) If due to stress of weather or any other cause beyond the reasonable control of the master of a vessel, and which the master of a vessel by the exercise of reasonable diligence is unable to prevent, avoid or remove, the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life or of the vessel is threatened, within 48 hours the undertaker must notify full details of the circumstances of the deposit to the MMO.

(2) The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.

### **Pre-construction plans and documentation**

20.—(1) The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) have been submitted to and

approved in writing by the MMO, in consultation with Trinity House, the MCA and UKHO as appropriate—

- (a) a design plan at a scale of between 1:25,000 and 1:50,000 in accordance with the layout principles, including detailed representation on the most suitably scaled admiralty chart, to be approved in writing by the MMO in consultation with Trinity House and the MCA setting out proposed details of the authorised scheme, including the:
  - (i) number, dimensions, specification, foundation type(s) and depth for each wind turbine generator and offshore substation platform;
  - (ii) the proposed layout of all wind turbine generators (which shall provide for two lines of orientation and otherwise be in accordance with the recommendations for layout contained in MGN654 and its annexes) and offshore substation platforms, including grid coordinates of the centre point of the proposed location for each wind turbine generator and offshore substation platform subject to up to 55m micro-siting in any direction unless otherwise agreed in writing with the MMO in consultation with the MCA and Trinity House;
  - (iii) proposed layout of all cables;
  - (iv) location and specification of all other aspects of the authorised scheme; and
  - (v) any archaeological exclusion zones or micro-siting requirements identified pursuant to condition 20(2)(d) or relating to any benthic habitats of conservation, ecological or economic importance constituting reef habitats of principal importance as listed under Section 41 of the Natural Environment and Rural Communities Act 2006,

to ensure conformity with the description of Work No. 1 and compliance with conditions 10, 11 and 12.

- (b) A construction programme to include details of—
  - (i) the proposed construction start date;
  - (ii) proposed timings for mobilisation of plant delivery of materials and installation works;
  - (iii) an indicative written construction programme for all wind turbine generators and offshore substation platforms forming part of the authorised scheme and licenced activities;
- (c) A monitoring plan (which accords with the offshore in principle monitoring plan) to include details of proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction monitoring and related reporting in accordance with conditions 27, 28 and 29 to be submitted to the MMO in accordance with the following:-
  - (i) at least six months prior to the first survey, detail of the pre-construction surveys and an outline of all proposed monitoring;
  - (ii) at least six months prior to commencement of construction, detail on construction monitoring; and
  - (iii) at least six months prior to completion of construction, details of operational monitoring, if required;

unless otherwise agreed in writing with the MMO.

- (d) an offshore construction method statement (which accords with the outline offshore construction method statement) in accordance with the construction methods assessed in the environmental statement, including details of—
  - (i) cable specification, installation and monitoring, to include—
    - (aa) the technical specification of the inter-array cables and interconnector cables,
    - (bb) a detailed cable specification and installation plan for the authorised scheme, incorporating a cable burial risk assessment. The detailed cable specification and installation plan will identify the risk of needing any cable protection that may exceed 5 percent of navigable depth referenced to Chart Datum. In the



- event that any area of cable protection exceeding 5 percent of navigable depth is identified, the cable specification and installation plan will set out details of any steps (to be determined following consultation with the MCA and Trinity House) to be taken to ensure existing and future safe navigation is not compromised; and
- (cc) details of cable monitoring including details of cable protection until the authorised scheme is decommissioned which includes a risk based approach to the management of unburied or shallow buried cables;
  - (ii) scour protection management and cable protection management including details of the need, type, sources, quantity and installation methods for scour protection and cable protection, with details updated and resubmitted for approval if changes to it are proposed following cable laying operations;
  - (iii) foundation installation methodology, including drilling methods and disposal of drill arisings and material extracted during seabed preparation for foundation and cable installation works;
  - (iv) piling methodology, in the event that driven or part-driven pile foundations are proposed to be used;
  - (v) contractors;
  - (vi) associated ancillary works; and
  - (vii) guard vessels to be employed;
- (e) an offshore environmental management plan (which accords with the outline environment management plan) to include details of—
- (i) a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents during construction and operation of the authorised scheme in relation to all activities carried out;
  - (ii) a chemical risk assessment, including information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance and standards;
  - (iii) a chemical risk assessment for all chemicals that have a pathway to the marine environment used for the marine licensed activities, outside the course of normal navigation, and are not present on the OSPAR List of Substances Used and Discharged Offshore which Are Considered to Pose Little or No Risk to the Environment (PLONOR) to be submitted to the MMO for approval no later than ten weeks prior to use of the chemicals and to include details of —
  - (iv) (aa) the function of the chemical;
  - (v) (bb) the quantities being used and the frequency of use;
  - (vi) (cc) the physical, chemical, and ecotoxicological properties;
  - (vii) waste management and disposal arrangements;
  - (viii) the appointment and responsibilities of a fisheries liaison officer;
  - (ix) a fisheries liaison and coexistence plan (which accords with the outline fisheries liaison and co-existence plan) to ensure relevant fishing fleets are notified of commencement of licensed activities pursuant to condition 15 and to address the interaction of the licensed activities with fishing activities;
  - (x) measures to minimise disturbance to marine mammals and rafting birds from transiting vessels; and
  - (xi) measures to minimise the potential spread of invasive non-native species;
- (f) an aids to navigation management plan to be agreed in writing by the MMO following consultation with Trinity House specifying how the undertaker will ensure compliance with condition 16 from the commencement of construction of the authorised scheme to the completion of decommissioning of the authorised scheme;

- (g) in the event that driven or part-driven pile foundations are proposed to be used a marine mammal mitigation protocol (in accordance with the outline marine mammal mitigation protocol), the intention of which is to prevent injury to marine mammals, following current best practice as advised by the relevant statutory nature conservation body; and
- (h) a vessel traffic management plan (in accordance with the outline vessel traffic management plan).

(2) The authorised scheme must not commence until a written scheme of archaeological investigation has been submitted to and approved by the MMO following consultation with the statutory historic body, in accordance with the outline offshore written scheme of investigation, and in accordance with industry good practice, following consultation with the statutory historic body to include—

- (a) details of responsibilities of the undertaker, archaeological consultant and contractor;
- (b) a methodology for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
- (c) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO within four months of any survey being completed;
- (d) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;
- (e) monitoring of archaeological exclusion zones during and post construction where required;
- (f) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting an OASIS (Online Access to the Index of archaeological investigations) form with a digital copy of the report within six months of completion of construction of the authorised scheme, and to notify the MMO that the OASIS form has been submitted to the National Record of the Historic Environment within two weeks of submission;
- (g) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme; and
- (h) a timetable for all further site investigations, which must allow sufficient opportunity to establish a full understanding of the historic environment within the Order limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licensed activities;

(3) Pre-commencement surveys and archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific written scheme of investigation (which must accord with the details set out in the outline offshore written scheme of investigation), which has been submitted to and approved by the MMO.

21.—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 20 must be submitted for approval at least six months before the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(2) The licensed activities must be carried out in accordance with the plans, protocols, statements, schemes and details approved under condition 20, unless otherwise agreed in writing by MMO.

### **Underwater Sound Management Strategy**

22.—(1) No driven or part-driven piling activities shall commence or low order UXO clearance can take place until an underwater sound management strategy for those activities, which accords with the outline underwater sound management strategy, has been submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body.

(2) The underwater sound management strategy submitted under sub-paragraph (1) must include details of the noise mitigation systems and/or noise abatement system that will be utilised to manage sound from driven or part-driven piling activities (or low order UXO clearance unless otherwise agreed in writing by the MMO).

(3) No driven or part-driven piling activities or low order UXO clearance may be undertaken between 15 February to 31 March (inclusive) of any year, unless the MMO provides written confirmation to the undertaker beforehand that such works can take place in all or in a specified part of the Order limits during this period or part of this period.

(4) In considering whether to provide the confirmation referred to in sub-paragraph (3) above, the MMO shall have regard to any report or reports provided to the MMO by or on behalf of the undertaker relating to such matters as additional baseline information, reduced spatial restrictions, piling management measures, installation techniques or noise propagation modelling.

(5) The underwater sound management strategy must be submitted to the MMO no later than six months prior to the commencement of the relevant activities unless otherwise agreed in writing by the MMO.

(6) The driven or part-driven piling activities and low order UXO clearance must be carried out in accordance with the approved underwater sound management strategy, unless otherwise agreed in writing by the MMO.

### **Low order unexploded ordnance clearance**

**23.**—(1) No low order unexploded ordnance clearance can take place until the following have been submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body and, in respect of the method statement, the MCA—

- (a) a method statement for low order unexploded ordnance clearance which must include—
  - (i) methodologies for—
    - (aa) identification and investigation of potential unexploded ordnance targets;
    - (bb) low order unexploded ordnance clearance; and
    - (cc) removal and disposal of large debris;
  - (ii) a plan showing the area in which clearance activities are proposed to take place;
  - (iii) a programme of works; and
  - (iv) any exclusion zones/ environmental micro-siting requirements;
- (b) a marine mammal mitigation protocol in accordance with the outline marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals, following current best practice as advised by the relevant statutory nature conservation body.

(2) The method statement and the marine mammal mitigation protocol must be submitted to the MMO for approval at least six months prior to the date on which it is intended for low order unexploded ordnance clearance activities to begin unless otherwise agreed in writing with the MMO.

(3) Any low order unexploded ordnance clearance activities must be undertaken in accordance with the method statement and marine mammal mitigation protocol approved under sub-paragraph (1).

(4) Subject to sub-paragraph (5), an unexploded ordnance close out report must be submitted to the MMO and the relevant statutory nature conservation body within six months following the end of the low order unexploded ordnance clearance activity and must include the following for each clearance undertaken—

- (a) co-ordinates, depth, current speed, charge utilised and the date and time of each clearance; and

- (b) whether any mitigation was deployed including feedback on practicalities of deployment of equipment and efficacy of the mitigation where reasonably practicable, or justification if this information is not available.
- (5) Should there be more than one low order unexploded ordnance clearance activity, the report required under sub-paragraph (4) will be provided at intervals agreed with the MMO.
- (6) The total number of low order unexploded ordnance clearance as part of the authorised scheme in this licence and the authorised scheme in licence 2 taken together must not exceed 13 (whether undertaken under this licence or licence 2).
- (7) No high order unexploded ordnance clearance is permitted by this marine licence.

### **Marine Noise Registry**

24.—(1) In the event that driven or part-driven pile foundations are proposed to be used as part of the foundation installation the undertaker must provide the following information to the Marine Noise Registry—

- (a) no less than six months prior to the commencement of each stage of construction of the licensed activities, information on the expected location, start and end dates of impact pile driving to satisfy the Marine Noise Registry’s Forward Look requirements;
  - (b) within two weeks after commencement of each stage of construction of the licensed activities, information on the location, start and end dates of impact pile driving to satisfy the Marine Noise Registry’s Forward Look requirements;
  - (c) at six month intervals following the commencement of pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry’s Close Out requirements by 7 April for winter season October – March inclusive and 7 October for summer season April – September inclusive or within 12 weeks of completion of impact pile driving whichever is earlier.
- (2) Within 12 weeks of the completion of pile driving the undertaker must submit information on the locations and dates of those activities to satisfy the Close Out requirements.
- (3) The undertaker must notify MMO of the successful submission of Forward Look or Close Out information pursuant to sub-paragraphs (1) to (3) above within seven days of the submissions to the Marine Noise Registry.
- (4) For the purpose of this condition—
- (a) “Marine Noise Registry” means the database of impulsive noise generating activities in UK seas maintained by Joint Nature Conservation Committee;
  - (b) “Forward Look” and “Close Out” requirements are as set out in the ‘UK Marine Noise Registry: Information Document, Version 1 (May 2016)’ or any updated information document.

### **Offshore safety management**

25. No part of the authorised scheme may commence until the MMO, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that stage of the project, adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN654 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” (or any equivalent guidance that replaces or supersedes it) and its annexes.

### **Reporting of engaged agents, contractors and vessels**

26.—(1) The undertaker must provide the following information in writing to the MMO, unless otherwise agreed in writing by the MMO—

- (a) the name, function, company number (if applicable), registered or head office address (as appropriate) of any agent or contractor appointed to engage in the licensed activities within seven days of appointment; and
- (b) each week during the construction of the authorised scheme a completed Hydrographic Note H102 listing the vessels currently and to be used in relation to the licensed activities.

(2) The undertaker must notify the MMO in writing of any vessel being used to carry on any licensed activity listed in this licence on behalf of the undertaker. Such notification must be received by the MMO no less than 24 hours before the commencement of the licensed activity. Notification must include the master's name, vessel type, vessel IMO number and vessel owner or operating company.

(3) Any changes to the supplied details must be notified to the MMO in writing at least 24 hours before the agent, contractor or vessel engages in the licensed activities.

### **Pre-construction monitoring and surveys**

27.—(1) The undertaker must, in discharging condition 20(1)(c) submit a monitoring plan or plans in accordance with the offshore in principle monitoring plan for written approval by the MMO in consultation with the relevant statutory nature conservation body, which must contain details of proposed monitoring and surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report.

(2) The survey proposals submitted under sub-paragraph (1) must be in general accordance with the principles set out in the offshore in principle monitoring plan and must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position or will enable the validation or otherwise of key predictions in the environmental statement.

(3) The baseline report proposals submitted under sub-paragraph (1) must ensure that the outcome of the agreed surveys, together with existing data and reports, are drawn together to present a valid statement of the pre-construction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.

(4) The pre-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake a swath-bathymetry survey to IHO Order 1a standard that meets the requirements of MGN654 and its supporting Hydrographic Guidelines for Offshore Renewable Energy Developers, which includes the requirement for the full density data and reports to be delivered to the MCA and the UKHO for the update of nautical charts and publications and side scan sonar, of the area(s) within the Order limits in which it is proposed to carry out construction works including an appropriate buffer around the location of each work.

(5) The undertaker must carry out the surveys specified within the monitoring plan or plans in accordance with that plan or plans, unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

### **Construction monitoring**

28.—(1) The undertaker must, in discharging condition 20(1)(c) for each stage of construction, submit details (which accord with the offshore in principle monitoring plan) for approval in writing by the MMO in consultation with the relevant statutory nature conservation bodies of any proposed monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The monitoring proposals must specify each monitoring proposal's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) The construction monitoring must include:

- (a) marine traffic monitoring in accordance with the offshore in principle monitoring plan, including the provision of reports on the results of that monitoring at the end of each year of the construction period to the MMO, MCA and Trinity House;
  - (b) in the event that driven or part-driven pile foundations are proposed, measurements of underwater sound generated by the installation of the first four piled foundations of each piled foundation type to be installed collectively under this licence and licence 2 unless the MMO otherwise agrees in writing; and
  - (c) in the event that driven or part-driven pile foundations are proposed, measurements of underwater sound generated by the installation of the first two piled foundations where it is anticipated hammer energies greater than 3,000kJ may be required for installation, unless the MMO otherwise agrees in writing.
- (3) In the event that piled foundations are proposed to be used, the details submitted in accordance with the marine mammal mitigation protocol must include proposals for monitoring marine mammals.
- (4) The undertaker must carry out the monitoring approved under sub-paragraph (1), including any further underwater sound monitoring required in writing by the MMO, and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.
- (5) The results of the initial underwater sound measurements monitored in accordance with sub-paragraph (2)(b) must be provided to the MMO within six weeks of the installation of the first four piled foundations. The assessment of this report by the MMO will determine whether any further underwater sound monitoring is required. If, in the reasonable opinion of the MMO in consultation with the relevant statutory nature conservation body, the assessment shows significantly different underwater sound modelling results to those assessed in the environmental statement or failures in mitigation, all piling activity must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.
- (6) The results of the any underwater sound measurements monitored in accordance with sub-paragraph (2)(c) must be provided to the MMO within six weeks of the installation of the first two piled foundations that exceed 3,000kJ of hammer energy. The assessment of this report by the MMO will determine whether any further underwater sound monitoring is required. If, in the reasonable opinion of the MMO in consultation with the relevant statutory nature conservation body, the assessment shows significantly different underwater sound modelling results to those assessed in the environmental statement or failures in mitigation, any piling activity where the hammer energy is anticipated to exceed 3,000kJ must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.
- (7) The undertaker must carry out the surveys specified in the offshore monitoring plan in accordance with that plan, including any further underwater sound monitoring required in writing by the MMO under sub-paragraph (4), unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

### **Post-construction monitoring**

29.—(1) The undertaker must, in discharging condition 20(1)(c) submit details (which accord with the offshore in principle monitoring plan) for approval in writing by the MMO in consultation with relevant statutory nature conservation bodies of proposed post-construction monitoring, including methodologies and timings, and a proposed format, content and timings for providing reports on the results.

(2) The monitoring proposals must specify each monitoring proposal's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(3) The post-construction monitoring referred to in sub-paragraph (1) must, unless otherwise agreed in writing with the MMO, have due regard to, but not be limited to, the need to—

- (a) undertake, within 12 months of completion of construction of the authorised scheme, a full sea floor coverage swath-bathymetry survey to IHO Order 1a standard that meets the requirements of MGN 654 and its supporting Hydrographic Guidelines for Offshore Renewable Energy Developers which includes the requirement for the full density data and reports to be delivered to the MCA and the UKHO for the update of nautical charts and publications, and side scan sonar, of the area(s) within the Order limits in which construction works were carried out to assess any changes in bedform topography and such further monitoring or assessment as may be agreed to ensure that cables (including fibre optic cables) have been buried or protected; and
  - (b) undertake post-construction marine traffic monitoring in accordance with the offshore in principle monitoring plan, including the provision of reports on the results of that monitoring to the MMO, MCA and Trinity House.
- (4) The undertaker must carry out the monitoring agreed under sub-paragraph (1) and provide the agreed reports to the MMO in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.
- (5) Following the installation of cables, details of cable monitoring required under 20(1)(d)(i) must be updated with the results of the post installation surveys.

### **Reporting of scour and cable protection**

30.—(1) Not more than four months following completion of the construction of the authorised scheme, the undertaker must provide the MMO and the relevant statutory nature conservation bodies with a report setting out details of the cable protection and scour protection used for the authorised scheme.

(2) The report must include the following information—

- (a) the location of cable protection and scour protection;
- (b) the volume of cable protection and scour protection; and
- (c) any other information relating to the cable protection and scour protection as agreed between the MMO and the undertaker.

(3) Any cable protection (other than the replenishment or replacement of existing cable protection) authorised under this licence must be deployed within 10 years from the date of completion of construction (as reported in the close-out report under condition 31) unless otherwise agreed by the MMO in writing.

### **Completion of construction**

31.—(1) The undertaker must submit a close-out report to the MMO, MCA, Trinity House, the UKHO and the relevant statutory nature conservation body within four months of the date of completion of construction. The close out report must confirm the date of completion of construction and must include the following details—

- (a) the final number of installed wind turbine generators and offshore substation platforms;
- (b) the installed wind turbine generator and offshore substation platform parameters;
- (c) as built plans;
- (d) latitude and longitude coordinates of the centre point of the location for each wind turbine generator and offshore substation platform provided as Geographical Information System data referenced to WGS84 datum; and
- (e) latitude and longitude coordinates of the inter-array and interconnector cables provided as Geographical Information System data referenced to WGS84 datum.

(2) Following completion of construction, no further construction activities can be undertaken under this licence.



## **Requirement for written approval**

32. Where under any of the above conditions the approval or agreement of the MMO is required, that approval or agreement must be given in writing.

## **SCHEDULE 4**

Article 5

### **Deemed Marine Licence under the 2009 Act – Licence 2: Offshore Substation Platforms and Interconnector Cables**

## **PART 1**

### **Licensed marine activities**

## **Interpretation**

1.—(1) In this licence—

“1989 Act” means the Electricity Act 1989(a);

“2004 Act” means the Energy Act 2004(b);

“2008 Act” means the Planning Act 2008(c);

“2009 Act” means the Marine and Coastal Access Act 2009(d);

“Annex I reef” means a reef of a type listed in Annex I to Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora;

“address” includes any number or address used for the purposes of electronic transmission;

“ancillary works” means the ancillary works described in Part 2 of Schedule 1 (ancillary works) and any other works authorised by this Order that are not development within the meaning of section 32 of the 2008 Act;

“authorised deposits” means the substances and articles specified in paragraph 4 of Part 1 of this licence;

“authorised scheme” means Work No.2 and Work No.3 and the further associated development described in paragraph 3 of Part 1 of this licence or any part of that work or development;

“bank holiday” means a bank holiday in England and Wales under section 1 of the Banking and Financial Dealings Act 1971(e);

“buoy” means any floating device used for navigational purposes or measurement purposes, including but not limited to wave buoys, LiDAR and guard buoys;

“cable” means up to 400kV cables for the transmission of electricity and includes fibre optic and other communications cables either within the cable or laid alongside;

“cable crossings” means the crossing of sub-sea cables, pipelines or other existing infrastructure by the cables (including inter-array cables) authorised by this Order together with cable protection;

“cable protection” means measures to protect cables from physical damage including but not limited to concrete mattresses, with or without frond devices, and/or rock placement, the use of bagged solutions filled with grout or other materials;

---

(a) 1989 c.29.  
(b) 2004 c.20.  
(c) 2008 c.29.  
(d) 2009 c.23.  
(e) 1971 c.80.

“chemicals” comprise both substances and preparations;

“commence” means the first carrying out of any licensed activities, save for pre-construction surveys, monitoring surveys, unexploded ordnance surveys and clearance of low order unexploded ordnance, and “commenced” and “commencement” must be construed accordingly;

“commercial operation” means in relation to any part of the authorised scheme, the exporting, transmission or conversion, on a commercial basis, of electricity;

“condition” means a condition in part 2 of this licence;

“electronic transmission” means a communication transmitted—

- (a) by means of an electronic communications network; or
- (b) by other means but while in electronic form;

“environmental statement” means the document certified as the environmental statement by the Secretary of State under article 11 (certification of plans, etc.) of the Order;

“foundation” means any of: a multi-leg pin-piled jacket, multi-leg suction bucket jacket, or gravity base foundation;

“gravity base foundation” means a structure principally of steel, concrete, or steel and concrete with a base which rests on the seabed either due to its own weight with or without added ballast or additional skirts and associated equipment including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“HAT” means highest astronomical tide;

“high order unexploded ordnance clearance” means an unexploded ordnance clearance method which intentionally seeks to detonate the unexploded ordnance;

“interconnector cables” means the cables linking the offshore substation platforms to each other;

“intrusive activities” means activities including anchoring of vessels, jacking up of vessels, temporary deposits and temporary wet storage areas;

“jacket foundation” means a steel jacket/lattice-type structure constructed principally of steel, fixed to the seabed with pin-piles or steel suction buckets and associated equipment including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“km” means kilometres;

“LAT” means lowest astronomical tide;

“layout principles” means the layout principles contained within Table 3.7 of the environmental statement project description referred to as document S\_D6\_15 in Schedule 5;

“LiDAR” means a light detection and ranging system used to measure weather and sea conditions;

“licence 1” means the marine licence set out in Schedule 3 (deemed marine licence under the 2009 Act – Licence 1: Wind Turbine Generators and other Offshore Infrastructure);

“licenced activities” means those activities specified in Part 1 of this licence;

“low order unexploded ordnance clearance” means an unexploded ordnance clearance method which does not seek to detonate the unexploded ordnance;

“m” means metres and “m<sup>2</sup>” means metres squared;

“maintain” includes inspect, upkeep, repair, adjust or alter the authorised scheme, and remove, reconstruct or replace any part of the authorised scheme, to the extent assessed in the environmental statement; and any derivative of “maintain” is to be construed accordingly;

“Marine Management Organisation” means the body created under the 2009 Act which is responsible for the regulation of this licence or any successor of that function and “MMO” must be construed accordingly;

“MCA” means the Maritime and Coastguard Agency, the executive agency of the Department for Transport;

“MCMS” means the Marine Case Management System web portal provided and operated by the MMO;

“measures to minimise disturbance to marine mammals and rafting birds from transiting vessels” means the document certified as the measures to minimise disturbance to marine mammals and rafting birds from transiting vessels by the Secretary of State under article 11 (certification of plans, etc.) for the purposes of this Order;

“offshore in principle monitoring plan” means the document certified as the offshore in principle monitoring plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“offshore order limits and grid coordinates plan” means the document certified as the offshore order limits and grid coordinates plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“offshore substation platform” means a structure above LAT and attached to the seabed by means of a foundation, with one or more decks and open with modular equipment or fully clad, containing—

- (c) electrical equipment required to switch, transform or convert electricity generated at the wind turbine generators to a higher voltage and provide reactive power compensation, including high voltage power transformers, high voltage switchgear and busbars, substation auxiliary systems and low voltage distribution, instrumentation, metering equipment and control systems, standby generators, shunt reactors, auxiliary and uninterruptible power supply systems; and
- (d) accommodation, storage, workshop auxiliary equipment and facilities for operating, maintaining and controlling the substation or wind turbine generators, including navigation, aviation and safety marketing and lighting, systems for vessel charging, access and retrieval, cranes, potable water supply, black water separation, stores, fuels and spares, communications systems and control hub facilities and other associated equipment and facilities;

“offshore surface structures” means offshore substation platforms and wind turbine generators;

“Order” means the Morgan Offshore Wind Project: Generation Assets Order 202[•];

“Order limits” means the limits shown on the offshore order limits and grid coordinates plan within which the authorised scheme may be carried out;

“outline environmental management plan” plan means the document certified as the outline environmental management plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline fisheries liaison and co-existence plan” plan means the document certified as the outline fisheries liaison and co-existence plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline marine mammal mitigation protocol” means the document certified as the outline marine mammal mitigation protocol by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore construction method statement” means the document certified as the outline offshore construction method statement by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore written scheme of investigation for archaeology” plan means the document certified as the outline offshore written scheme of investigation for archaeology by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline offshore operations and maintenance plan” plan means the document certified as the outline offshore operations and maintenance plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline underwater sound management strategy” means the document certified as the outline underwater sound management strategy” by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“outline vessel traffic management plan” means the document certified as the outline vessel traffic management plan by the Secretary of State under article 11 (certification of plans, etc.) of this Order;

“operation” means the undertaking of activities authorised by this Order which are not part of the construction, commissioning or decommissioning of the authorised development;

“pathway to the marine environment” means open systems or closed systems that require top up;

“pin-piles” means steel or concrete cylindrical piles driven and/or drilled into the seabed to secure jacket foundations;

“preparation” means a mixture or solution composed of two or more substances;

“scour protection” means measures to prevent loss of seabed sediment around any structure placed in or on the seabed including by the use of bagged solutions, filled with grout or other materials, protective aprons, mattresses with or without frond devices and rock and gravel placement;

“substance” means a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition;

“suction bucket foundation” means a tubular steel structure which partially or fully penetrates the seabed and associated equipment, including scour protection, J-tubes, corrosion protection systems and access platforms and equipment;

“statutory historic body” means an organisation charged by the government with advising on matters related to historic buildings and monuments;

“statutory nature conservation body” means an organisation charged by the government with advising on nature conservation matters;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“UKHO” means the United Kingdom Hydrographic Office of Admiralty Way, Taunton, Somerset, TA1 2DN;

“undertaker” means Morgan Offshore Wind Limited (company registration number: 13497271) whose registered office address is Chertsey Road, Sunbury on Thames, Middlesex, United Kingdom, TW16 7BP;

“vessel” means every description of vessel, however propelled or moved, and includes a non-displacement craft, a personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over water and which is at the time in, on or over water;

“works plan” means the plans certified as the works plan by the Secretary of State under Article 11 (certification of plans, etc.) of this Order.

(2) In this licence a reference to any statute, order, regulation or similar instrument is a reference to a statute, order, regulation or instrument as amended by any subsequent statute, order, regulation or instrument or as contained in any subsequent re-enactment.

(3) In this licence, unless otherwise indicated—

(a) all times are Greenwich Mean Time (“GMT”); and

(b) all coordinates are latitude and longitude degrees and minutes to two decimal places.

(4) Unless otherwise stated or agreed with the MMO, all notifications must be sent by the undertaker to the MMO using MCMS. Except where otherwise notified in writing by the relevant organisation, the addresses for correspondence for the purposes of this Schedule are—

- (a) Centre for Environment, Fisheries and Aquaculture Science  
Pakefield Road  
Lowestoft  
Suffolk  
NR33 0HT  
Tel: 01502 562 244
- (b) Historic England  
4th Floor  
Cannon Bridge House  
25 Dowgate Hill  
London  
EC4R 2YA Tel: 0161 421 416  
Email: [northwest@historicengland.org.uk](mailto:northwest@historicengland.org.uk)
- (c) Marine Management Organisation  
Marine Licensing Team  
Lancaster House  
Hampshire Court  
Newcastle upon Tyne  
NE4 7YH  
Tel: 0300 231 1032  
Email: [marine.consents@marinemangement.org.uk](mailto:marine.consents@marinemangement.org.uk)
- (d) Marine Management Organisation (local office)  
Lutra House  
Dodd Way  
Walton Summit  
Preston  
PR5 8BX  
Tel: 02080 265 643  
Email: [preston@marinemangement.org.uk](mailto:preston@marinemangement.org.uk)
- (e) Marine Management Organisation  
Marine Pollution Response Team  
Tel. (during office hours): 03008 002 024,  
Tel. (outside office hours): 07770 977 825 or 0845 051 8486
- (f) Maritime and Coastguard Agency  
UK Technical Services Navigation Spring Place  
105 Commercial Road  
Southampton  
SO15 1EG  
Email: [navigationsafety@mcga.gov.uk](mailto:navigationsafety@mcga.gov.uk)
- (g) Natural England  
Foss House  
Kings Pool  
1-2 Peasholme Green

York  
YO1 7PX  
Tel: 03000 604 911

(h) Trinity House

Tower Hill

London

EC3N 4DH

Tel: 020 7481 6900

(i) United Kingdom Hydrographic Office

Admiralty Way

Taunton

Somerset

TA1 2DN

Tel: 01823 337 900

### Details of licensed marine activities

2. Subject to the conditions, this licence authorises the undertaker (and any agent or contractor acting on their behalf) to carry out the following licensable marine activities under section 66(1) (licensable marine activities) of the 2009 Act—

- (a) the deposit at sea of the substances and objects specified in paragraph 4 below;
- (b) the construction of works in or over the sea or on or under the seabed;
- (c) dredging for the purposes of seabed preparation for foundation works or cable works;
- (d) the removal of sediment samples for the purposes of informing environmental monitoring under this licence during pre-construction, construction and operation;
- (e) site clearance and preparation works including clearance of debris, boulder clearance and the removal of out of service cables and static fishing equipment;
- (f) low order unexploded ordnance clearance;
- (g) the use of extracted seabed material within gravity base foundations; and
- (h) the disposal of up to 1,253,915 cubic metres of inert material of natural origin within the Order limits produced during construction drilling or seabed preparation for foundation works, cable works and boulder clearance works at disposal site reference IS155 within the extent of the Order limits seaward of MHWS, unless otherwise agreed in writing with the MMO.

3. Such activities are authorised in relation to the construction, maintenance and operation of the authorised scheme being—

*Work No. 2*—up to four offshore substation platforms (all or any of which may alternatively be constructed under licence 1); and

*Work No.3*—a network of subsea interconnector cables between the offshore substation platforms including cable crossings and cable protection (which may alternatively be constructed under licence 1).

In connection with the licenced activities in Work Nos. 2 and 3 and to the extent that they do not otherwise form part of any such work, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised scheme and which fall within the scope of the work assessed by the environmental statement, including—

- (a) scour protection around the foundations of the offshore structures;

- (b) cable protection measures such as rock placement and the placement of rock and/or concrete mattresses, with or without frond devices;
- (c) dredging;
- (d) the removal of material from the seabed and the disposal of inert material of natural origin and/or dredged material within the Order limits produced during construction drilling and seabed preparation for foundation works, cable installation preparation such as sandwave clearance, boulder clearance and pre-trenching; and
- (e) creation and use of temporary vessel laydown areas and use of cable anchors;
- (f) temporary landing places, moorings or other means of accommodating vessels in the construction or maintenance of the authorised scheme;
- (g) removal of static fishing equipment;
- (h) the use of extracted seabed material within gravity base foundations;
- (i) lighting; and
- (j) buoys, beacons, fenders and other navigational warning or ship impact protection works.

4. The substances and objects authorised for deposit at sea are—

- (a) iron, steel, copper and aluminium;
- (b) stone and rock;
- (c) concrete and grout;
- (d) sand and gravel;
- (e) plastic and synthetic;
- (f) material extracted from within the Order limits during construction drilling or seabed preparation for foundation works and cable sandwave preparation works; and
- (g) marine coatings, other chemicals and timber.

5. The grid coordinates for Work No.2 and Work No.3 are as shown on the order limits and grid coordinates plan and as specified below—

| <i>Point</i> | <i>Latitude</i>   | <i>Longitude</i> |
|--------------|-------------------|------------------|
| 1            | 53° 54' 27.788" N | 3° 58' 8.915" W  |
| 2            | 53° 54' 41.257" N | 3° 58' 42.184" W |
| 3            | 53° 57' 6.032" N  | 4° 3' 55.525" W  |
| 4            | 53° 57' 7.936" N  | 4° 4' 25.017" W  |
| 5            | 53° 57' 13.636" N | 4° 5' 53.497" W  |
| 6            | 53° 58' 7.549" N  | 4° 7' 48.094" W  |
| 7            | 54° 0' 28.539" N  | 4° 12' 48.480" W |
| 8            | 54° 0' 33.128" N  | 4° 12' 41.699" W |
| 9            | 54° 0' 39.541" N  | 4° 12' 32.331" W |
| 10           | 54° 0' 49.220" N  | 4° 12' 18.682" W |
| 11           | 54° 0' 58.979" N  | 4° 12' 5.399" W  |
| 12           | 54° 1' 0.852" N   | 4° 12' 2.795" W  |
| 13           | 54° 1' 10.663" N  | 4° 11' 49.441" W |
| 14           | 54° 1' 20.488" N  | 4° 11' 36.537" W |
| 15           | 54° 1' 26.187" N  | 4° 11' 24.779" W |
| 16           | 54° 1' 31.886" N  | 4° 11' 13.315" W |
| 17           | 54° 1' 33.367" N  | 4° 11' 10.387" W |
| 18           | 54° 1' 34.438" N  | 4° 11' 8.270" W  |
| 19           | 54° 1' 39.125" N  | 4° 10' 59.214" W |
| 20           | 54° 1' 41.978" N  | 4° 10' 53.701" W |
| 21           | 54° 1' 42.739" N  | 4° 10' 52.231" W |



|    |                  |                  |
|----|------------------|------------------|
| 22 | 54° 1' 47.148" N | 4° 10' 43.936" W |
| 23 | 54° 1' 48.940" N | 4° 10' 40.404" W |
| 24 | 54° 1' 57.247" N | 4° 10' 24.352" W |
| 25 | 54° 2' 5.706" N  | 4° 10' 8.569" W  |
| 26 | 54° 2' 11.564" N | 4° 9' 57.954" W  |
| 27 | 54° 2' 14.425" N | 4° 9' 52.857" W  |
| 28 | 54° 2' 14.433" N | 4° 9' 52.843" W  |
| 29 | 54° 2' 14.446" N | 4° 9' 52.820" W  |
| 30 | 54° 2' 23.202" N | 4° 9' 37.580" W  |
| 31 | 54° 2' 23.221" N | 4° 9' 37.547" W  |
| 32 | 54° 2' 23.229" N | 4° 9' 37.534" W  |
| 33 | 54° 2' 23.238" N | 4° 9' 37.518" W  |
| 34 | 54° 2' 23.239" N | 4° 9' 37.517" W  |
| 35 | 54° 2' 32.133" N | 4° 9' 22.564" W  |
| 36 | 54° 2' 32.146" N | 4° 9' 22.542" W  |
| 37 | 54° 2' 32.159" N | 4° 9' 22.521" W  |
| 38 | 54° 2' 32.166" N | 4° 9' 22.509" W  |
| 39 | 54° 2' 32.172" N | 4° 9' 22.500" W  |
| 40 | 54° 2' 41.223" N | 4° 9' 7.804" W   |
| 41 | 54° 2' 41.236" N | 4° 9' 7.782" W   |
| 42 | 54° 2' 41.249" N | 4° 9' 7.761" W   |
| 43 | 54° 2' 41.257" N | 4° 9' 7.749" W   |
| 44 | 54° 2' 41.263" N | 4° 9' 7.739" W   |
| 45 | 54° 2' 50.489" N | 4° 8' 53.271" W  |
| 46 | 54° 2' 59.863" N | 4° 8' 39.076" W  |
| 47 | 54° 3' 9.407" N  | 4° 8' 25.119" W  |
| 48 | 54° 3' 19.079" N | 4° 8' 11.466" W  |
| 49 | 54° 3' 28.890" N | 4° 7' 58.099" W  |
| 50 | 54° 3' 38.836" N | 4° 7' 45.024" W  |
| 51 | 54° 3' 48.923" N | 4° 7' 32.234" W  |
| 52 | 54° 3' 52.208" N | 4° 7' 28.172" W  |
| 53 | 54° 3' 56.043" N | 4° 7' 23.528" W  |
| 54 | 54° 3' 59.107" N | 4° 7' 19.782" W  |
| 55 | 54° 3' 59.122" N | 4° 7' 19.764" W  |
| 56 | 54° 3' 59.130" N | 4° 7' 19.754" W  |
| 57 | 54° 4' 1.160" N  | 4° 7' 17.353" W  |
| 58 | 54° 4' 1.181" N  | 4° 7' 17.328" W  |
| 59 | 54° 4' 6.734" N  | 4° 7' 10.779" W  |
| 60 | 54° 4' 7.781" N  | 4° 7' 9.560" W   |
| 61 | 54° 4' 9.456" N  | 4° 7' 7.587" W   |
| 62 | 54° 4' 13.935" N | 4° 7' 2.501" W   |
| 63 | 54° 4' 16.028" N | 4° 7' 0.112" W   |
| 64 | 54° 4' 18.943" N | 4° 6' 56.806" W  |
| 65 | 54° 4' 19.913" N | 4° 6' 55.716" W  |
| 66 | 54° 4' 24.700" N | 4° 6' 50.475" W  |
| 67 | 54° 4' 30.489" N | 4° 6' 44.156" W  |
| 68 | 54° 4' 35.097" N | 4° 6' 39.269" W  |
| 69 | 54° 4' 40.000" N | 4° 6' 34.145" W  |
| 70 | 54° 4' 41.189" N | 4° 6' 32.904" W  |
| 71 | 54° 4' 45.972" N | 4° 6' 28.021" W  |

|    |                   |                  |
|----|-------------------|------------------|
| 72 | 54° 3' 42.182" N  | 4° 0' 24.131" W  |
| 73 | 54° 0' 25.772" N  | 3° 53' 55.337" W |
| 74 | 53° 58' 34.172" N | 3° 47' 19.232" W |
| 75 | 53° 56' 34.760" N | 3° 47' 14.121" W |

6. This marine licence remains in force until the authorised scheme has been decommissioned in accordance with a programme approved by the Secretary of State under section 106 (approval of decommissioning programmes) of the 2004 Act including any modification to the programme under section 108 (reviews and revisions of decommissioning programmes) of the 2004 Act, and the completion of such programme has been confirmed by the Secretary of State in writing.

7. The provisions of section 72 (variation, suspension, revocation and transfer) of the 2009 Act apply to this licence except that the provisions of section 72(7) and (8) relating to the transfer of the licence apply only to a transfer not falling within article 7 (benefit of order) of the Order.

8. With respect to any condition which requires the licensed activities be carried out in accordance with the details, plans or schemes approved under this licence, the approved details, plans or schemes are taken to include any amendments that may subsequently be approved in writing by the MMO.

9. Any amendments to or variations from the approved details, plans or schemes must be in accordance with the principles and assessments set out in the environmental statements. Such agreement may only be given where it has been demonstrated to the satisfaction of the MMO that it is unlikely to or will not give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

## PART 2

### Conditions

#### Design parameters

10.—(1) The authorised scheme must be constructed in accordance with the parameters assessed in the environmental statement and set out in Table 3.

(2) References to the location of an offshore surface structure in Table 3 is a reference to the centre point of that structure.

**Table 3**

| <i>Parameter</i>                                                                                                       | <i>Value</i> |
|------------------------------------------------------------------------------------------------------------------------|--------------|
| Minimum distance between offshore surface structures (in all directions) (m)                                           | 1,400        |
| Maximum diameter of pin-piles for offshore substation platforms on jacket pin-pile foundations (m)                     | 5.5          |
| Maximum diameter of gravity base at the seabed for offshore substation platforms on gravity base foundations (m)       | 80           |
| Maximum diameter of buckets for offshore substation platforms on suction bucket jackets (m)                            | 18           |
| Maximum number of offshore substation platforms                                                                        | 4            |
| Maximum dimensions of offshore substations (excluding towers, helipads, masts, and cranes):                            |              |
| Height when measured from LAT (m)                                                                                      | 70           |
| Length (m)                                                                                                             | 80           |
| Width (m)                                                                                                              | 60           |
| Maximum total seabed footprint area for offshore substation foundations (including scour protection) (m <sup>2</sup> ) | 24,964       |

|                                                                                             |         |
|---------------------------------------------------------------------------------------------|---------|
| Maximum volume of scour protection for offshore substation foundations (m <sup>3</sup> )    | 58,361  |
| Maximum total length of cables (interconnector) (km)                                        | 60      |
| Maximum number of cable crossings (interconnector)                                          | 10      |
| Maximum volume of cable protection (interconnector) (m <sup>3</sup> )                       | 210,000 |
| Maximum total seabed footprint area for cable protection (interconnector) (m <sup>2</sup> ) | 130,000 |

11. The total number of offshore substation platforms forming part of the authorised scheme in this licence and the authorised scheme in licence 1 taken together must not exceed four (whether constructed under this licence or licence 1).

12. The total length of interconnector cables forming part of the authorised scheme in this licence and the authorised scheme in licence 1 taken together must not exceed 60 kilometres (whether constructed under this licence or licence 1).

### **Maintenance of the authorised scheme**

13.—(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.

(2) Maintenance works include but are not limited to—

- (a) offshore substation platform replacement;
- (b) painting and applying other coatings to or offshore substation platforms;
- (c) bird waste and marine growth removal;
- (d) cable remedial burial;
- (e) cable repairs and replacement;
- (f) access ladder and boat landing replacement;
- (g) offshore substation platform anode replacement; and
- (h) J-tube repair/replacement.

(3) An operations and maintenance plan in accordance with the outline offshore operations and maintenance plan must be submitted to the MMO for approval in writing at least six months prior to commencement of the operation of licensed activities and must provide for review and resubmission every three years during the operational phase.

(4) All operation and maintenance activities must be carried out in accordance with the plan approved under sub-paragraph (3).

(5) An annual maintenance report must be submitted to the MMO in writing within one month following the first anniversary of the date of commencement of operations, and every year thereafter until the permanent cessation of operation.

(6) The annual maintenance report in sub-paragraph (5) must provide a record of the licenced activities during the preceding year, the timing of activities and methodologies used.

(7) Unless otherwise agreed in writing with the MMO, every fifth year the undertaker must submit to the MMO in writing, within one month of that date, a consolidated maintenance report which will—

- (a) Include a review of licenced activities undertaken during the preceding five years with reference to the reports submitted in accordance with sub-paragraph (5) of this licence; and
- (b) Reconfirm the applicability of the methodologies and frequencies of the licensable activities permitted by this licence for the remaining duration of this licence.

## **Extension of time periods**

14. Any time period given in this licence to either the undertaker or the MMO may be extended with the agreement of the other party such agreement not to be unreasonably withheld or delayed.

## **Notifications and inspections**

15. —(1) The undertaker must ensure that—

- (a) a copy of this licence (issued as part of the grant of the Order) and any subsequent amendments or revisions to it is provided to—
  - (i) all agents and contractors notified to the MMO in accordance with condition 26;
  - (ii) the masters and transport managers responsible for the vessels notified to the MMO in accordance with condition 26;
- (b) within 28 days of receipt of a copy of this licence those persons referred to in paragraph (a) must confirm receipt of this licence in writing to the MMO.

(2) Only those persons and vessels notified to the MMO in accordance with condition 26 are permitted to carry out the licensed activities.

(3) Copies of this licence must also be available for inspection at the following locations—

- (a) the undertaker's registered address;
- (b) any site office located at or adjacent to the construction site and used by the undertaker or its agents and contractors responsible for the loading, transportation or deposit of the authorised deposits; and
- (c) on board each vessel and at the office of any transport manager with responsibility for vessels from which authorised deposits or removals are to be made.

(4) The documents referred to in sub-paragraph (1)(a) must be available for inspection by an authorised enforcement officer at the locations set out in sub-paragraph (3)(b).

(5) The undertaker must provide access, and if necessary appropriate transportation, to the offshore construction site or any other associated works or vessels to facilitate any inspection that the MMO considers necessary to inspect the works during the construction and operation of the authorised scheme.

(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 and within five days of the completion of the licensed activity.

(7) The Kingfisher Information Service of Seafish must be informed of details of the vessel routes, timings and locations relating to the construction of the authorised scheme or part thereof by including the information in a notice via their portal (<https://kingfisherbulletin.org/submit-notice>) and by email to [kingfisher@seafish.co.uk](mailto:kingfisher@seafish.co.uk) —

- (a) at least 14 days prior to the commencement of offshore activities, for inclusion in the Kingfisher Fortnightly Bulletin and offshore hazard awareness data; and
- (b) as soon as reasonably practicable and no later than 24 hours after completion of the authorised scheme

and confirmation of notification must be provided to the MMO within five days.

(8) The undertaker must ensure that a local notification to mariners is issued at least 14 days prior to the commencement of the authorised scheme or any part thereof advising of the start date and the expected vessel routes from the construction ports to the relevant location. Copies of all notices must be provided to the MMO, MCA Trinity House and UKHO within five days.

(9) The undertaker must ensure that local notifications to mariners are updated and reissued at weekly intervals during construction activities and at least five days before any planned operations and maintenance works (or otherwise agreed) and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction programme and monitoring plan approved under conditions 20(1)(b)) and 20(1)(c). Copies of all notices must be provided to the MMO and UKHO within five days.

(10) The undertaker must notify UKHO of completion (within 14 days) of the authorised scheme or any part thereof in order that all necessary amendments are made to nautical charts. Copies of all notices must be provided to the MMO and MCA within five days.

(11) In case of damage to, or destruction or decay of, the authorised scheme or any part thereof, excluding the exposure of cables and faults, the undertaker must as soon as reasonably practicable and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify the MMO, MCA, Trinity House, the Kingfisher Information Service of Seafish, regional fisheries contact and UKHO.

(12) In case of buried cables becoming exposed on or above the seabed, the undertaker must within three days following identification of a cable exposure, notify mariners regional fisheries contact and the Kingfisher Information Service of Seafish of the location and extent of exposure. Copies of all notices must be provided to the MMO, MCA, Trinity House, and UKHO within five days.

(13) The undertaker must ensure that the MMO, the MMO Local Office, local fishermen's organisations, and the Source Data Receipt Team at the UKHO Taunton, Somerset, TA1 2DN (sdr@ukho.gov.uk) are notified within five days of each instance of cable repair, replacement or protection replenishment activity.

### **Aids to navigation**

16.—(1) The undertaker must during the period from commencement of construction of the authorised scheme to completion of decommissioning exhibit such lights, marks, sounds, signals and other aids to navigation, and take such other steps for the prevention of danger to navigation, as Trinity House may from time to time direct.

(2) The undertaker must during the period from commencement of construction of the authorised scheme to completion of decommissioning keep Trinity House and the MMO informed of progress of the authorised scheme including—

- (a) notice of commencement of construction of the authorised scheme within 24 hours of commencement having occurred;
- (b) notice within 24 hours of any aids to navigation being established by the undertaker; and
- (c) notice within five days of completion of construction of the authorised scheme.

(3) The undertaker must provide reports to Trinity House on the availability of aids to navigation in accordance with the frequencies set out in the aids to navigation management plan agreed pursuant to condition 20(1)(f) using the reporting system provided by Trinity House.

(4) The undertaker must during the period from commencement of construction of the authorised scheme to completion of decommissioning notify Trinity House and the MMO of any failure of the aids to navigation and the timescales and plans for remedying such failures, as soon as possible and no later than 24 hours following the undertaker becoming aware of any such failure.

(5) In the event that the provisions of condition 15(11) are invoked, the undertaker must lay down such buoys, exhibit such lights and take such other steps for preventing danger to navigation as directed by Trinity House.

### **Colouring of structures**

17. Except as otherwise required by Trinity House the undertaker must paint all structures forming part of the authorised scheme yellow (colour code RAL 1023) from at least HAT to a height as directed by Trinity House. Unless the MMO otherwise directs, the undertaker must paint the remainder of the structures grey (colour code RAL 7035).

## **Chemicals, drilling and debris**

18.—(1) The undertaker must ensure that any coatings and treatments are suitable for use in the marine environment and are used in accordance with guidelines approved by the Health and Safety Executive and the Environment Agency Pollution Prevention Control Guidelines.

(2) The storage, handling, transport and use of fuels, lubricants, chemicals and other substances must be undertaken so as to prevent releases into the marine environment, including bunding of 110 percent of the total volume of all reservoirs and containers.

(3) The undertaker must inform the MMO in writing of the location and quantities of material disposed of each month under this licence by submission of a disposal return by 15 February each year for the months August to January inclusive, and by 15 August each year for the months February to July inclusive.

(4) 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 disposal site reference IS155 within the extent of the Order limits seaward of MHWS. Any other materials must be screened out before disposal of the inert material at this site.

(5) The undertaker must ensure that any rock material used in the construction of the authorised scheme is from a recognised source, free from contaminants and containing minimal fines.

(6) In the event that any rock material used in the construction of the authorised scheme is misplaced or lost within the Order limits, the undertaker must report the loss in writing to the local enforcement office within 48 hours and if the MMO reasonably considers such material to constitute a navigation or environmental hazard (dependent on the size and nature of the material) the undertaker must, in that event, demonstrate to the MMO that reasonable attempts have been made to locate, remove or move any such material.

(7) The undertaker must ensure that no waste concrete slurry or wash water from concrete or cement works are discharged into the marine environment. Concrete and cement mixing and washing areas must be contained to prevent run off entering the water through the freeing ports.

(8) The undertaker must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO Marine Pollution Response Team in accordance with the marine pollution contingency plan agreed under condition 20(1)(e).

(9) Debris or dropped objects which are considered a danger or hazard to navigation must be reported as soon as reasonably practicable but no later than six hours from the undertaker becoming aware of an incident, to the relevant HM Coastguard Maritime Rescue Co-ordination Centre by telephone (0344 382 0570), and the UK Hydrographic Office email: [navwarnings@btconnect.com](mailto:navwarnings@btconnect.com).

(10) All dropped objects including those in condition 18(9), must be reported to the MMO using the dropped object procedure form (including any updated form as provided by the MMO) as soon as reasonably practicable and in any event within 24 hours of the undertaker becoming aware of an incident, unless otherwise agreed in writing with the MMO.

(11) On receipt of notification of the dropped object procedure form the MMO may require relevant surveys to be carried out by the undertaker (such as side scan sonar) if reasonable to do so and the MMO may require obstructions to be removed from the marine environment at the undertaker's expense if reasonable to do so.

## **Force Majeure**

19.—(1) If due to stress of weather or any other cause beyond the reasonable control of the master of a vessel, and which the master of a vessel by the exercise of reasonable diligence is unable to prevent, avoid or remove, the master of a vessel determines that it is necessary to deposit the authorised deposits within or outside of the Order limits because the safety of human life or of the vessel is threatened, within 48 hours the undertaker must notify full details of the circumstances of the deposit to the MMO.

(2) The unauthorised deposits must be removed at the expense of the undertaker unless written approval is obtained from the MMO.

## Pre-construction plans and documentation

20.—(1) The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by the MMO, in consultation with Trinity House, the MCA and UKHO as appropriate—

- (a) a design plan at a scale of between 1:25,000 and 1:50,000 in accordance with the layout principles, including detailed representation on the most suitably scaled admiralty chart, to be approved in writing by the MMO in consultation with Trinity House and the MCA setting out proposed details of the authorised scheme, including the:
  - (i) number, dimensions, specification, foundation type(s) and depth for each substation platform;
  - (ii) the proposed layout of all offshore substation platforms, including grid coordinates of the centre point of the proposed location for each offshore substation platform subject to up to 55m micro-siting in any direction unless otherwise agreed in writing with the MMO in consultation with the MCA and Trinity House;
  - (iii) proposed layout of all cables;
  - (iv) location and specification of all other aspects of the authorised scheme; and
  - (v) any archaeological exclusion zones or micro-siting requirements identified pursuant to condition 20(2)(d) or relating to any benthic habitats of conservation, ecological or economic importance constituting reef habitats of principal importance as listed under Section 41 of the Natural Environment and Rural Communities Act 2006,to ensure conformity with the description of Work Nos 2 and 3 and compliance with conditions 10, 11 and 12.
- (b) a construction programme to include details of—
  - (i) the proposed construction start date;
  - (ii) proposed timings for mobilisation of plant delivery of materials and installation works;
  - (iii) an indicative written construction programme for all offshore substation platforms forming part of the authorised scheme and licenced activities;
- (c) a monitoring plan (which accords with the offshore in principle monitoring plan) to include details of proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction monitoring and related reporting in accordance with conditions 27, 28 and 29 to be submitted to the MMO in accordance with the following:-
  - (i) at least six months prior to the first survey, detail of the pre-construction surveys and an outline of all proposed monitoring;
  - (ii) at least six months prior to commencement of construction, detail on construction monitoring;
  - (iii) at least six months prior to completion of construction, details of operational monitoring, if required; andunless otherwise agreed in writing with the MMO.
- (d) an offshore construction method statement (which accords with the outline offshore construction method statement) in accordance with the construction methods assessed in the environmental statement, including details of—
  - (i) cable specification, installation and monitoring, to include—
    - (aa) the technical specification of the interconnector cables;
    - (bb) a detailed cable specification and installation plan for the authorised scheme, incorporating a cable burial risk assessment. The detailed cable specification and installation plan will identify the risk of needing any cable protection that may exceed 5 percent of navigable depth referenced to Chart Datum. In the



- event that any area of cable protection exceeding 5 percent of navigable depth is identified, the cable specification and installation plan will set out details of any steps (to be determined following consultation with the MCA and Trinity House) to be taken to ensure existing and future safe navigation is not compromised; and
- (cc) details of cable monitoring including details of cable protection until the authorised scheme is decommissioned which includes a risk based approach to the management of unburied or shallow buried cables;
  - (ii) scour protection management and cable protection management including details of the need, type, sources, quantity and installation methods for scour protection and cable protection, with details updated and resubmitted for approval if changes to it are proposed following cable laying operations;
  - (iii) foundation installation methodology, including drilling methods and disposal of drill arisings and material extracted during seabed preparation for foundation and cable installation works;
  - (iv) piling methodology, in the event that driven or part-driven pile foundations are proposed to be used;
  - (v) contractors;
  - (vi) associated ancillary works; and
  - (vii) guard vessels to be employed;
- (e) an offshore environmental management plan (which accords with the outline environment management plan) to include details of—
- (i) a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents during construction and operation of the authorised scheme in relation to all activities carried out;
  - (ii) a chemical risk assessment, including information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance and standards;
  - (iii) a chemical risk assessment for all chemicals that have a pathway to the marine environment used for the marine licensed activities, outside the course of normal navigation, and are not present on the OSPAR List of Substances Used and Discharged Offshore which Are Considered to Pose Little or No Risk to the Environment (PLONOR) to be submitted to the MMO for approval no later than ten weeks prior to use of the chemicals and to include details of —
  - (iv) (aa) the function of the chemical;
  - (v) (bb) the quantities being used and the frequency of use;
  - (vi) (cc) the physical, chemical, and ecotoxicological properties;
  - (vii) waste management and disposal arrangements;
  - (viii) the appointment and responsibilities of a fisheries liaison officer;
  - (ix) a fisheries liaison and coexistence plan (which accords with the outline fisheries liaison and co-existence plan) to ensure relevant fishing fleets are notified of commencement of licensed activities pursuant to condition 15 and to address the interaction of the licensed activities with fishing activities;
  - (x) measures to minimise disturbance to marine mammals and rafting birds from transiting vessels; and
  - (xi) measures to minimise the potential spread of invasive non-native species.
- (f) an aids to navigation management plan to be agreed in writing by the MMO following consultation with Trinity House specifying how the undertaker will ensure compliance with condition 16 from the commencement of construction of the authorised scheme to the completion of decommissioning of the authorised scheme;

- (g) in the event that driven or part-driven pile foundations are proposed to be used a marine mammal mitigation protocol (in accordance with the outline marine mammal mitigation protocol), the intention of which is to prevent injury to marine mammals, following current best practice as advised by the relevant statutory nature conservation body; and
- (h) a vessel traffic management plan (in accordance with the outline vessel traffic management plan).

(2) The authorised scheme must not commence until a written scheme of archaeological investigation has been submitted to and approved by the MMO following consultation with the statutory historic body, in accordance with the outline offshore written scheme of investigation, and in accordance with industry good practice, following consultation with the statutory historic body to include—

- (a) details of responsibilities of the undertaker, archaeological consultant and contractor;
- (b) a methodology for further site investigation including any specifications for geophysical, geotechnical and diver or remotely operated vehicle investigations;
- (c) archaeological analysis of survey data, and timetable for reporting, which is to be submitted to the MMO within four months of any survey being completed;
- (d) delivery of any mitigation including, where necessary, identification and modification of archaeological exclusion zones;
- (e) monitoring of archaeological exclusion zones during and post construction where required;
- (f) a requirement for the undertaker to ensure that a copy of any agreed archaeological report is deposited with the National Record of the Historic Environment, by submitting an OASIS (Online Access to the Index of archaeological investigations) form with a digital copy of the report within six months of completion of construction of the authorised scheme, and to notify the MMO that the OASIS form has been submitted to the National Record of the Historic Environment within two weeks of submission;
- (g) a reporting and recording protocol, including reporting of any wreck or wreck material during construction, operation and decommissioning of the authorised scheme; and
- (h) a timetable for all further site investigations, which must allow sufficient opportunity to establish a full understanding of the historic environment within the Order limits and the approval of any necessary mitigation required as a result of the further site investigations prior to commencement of licensed activities;

(3) Pre-commencement surveys and archaeological investigations and pre-commencement material operations which involve intrusive seabed works must only take place in accordance with a specific written scheme of investigation (which must accord with the details set out in the outline offshore written scheme of investigation) which has been submitted to and approved by the MMO.

21.—(1) Each programme, statement, plan, protocol or scheme required to be approved under condition 20 must be submitted for approval at least six months before the intended commencement of licensed activities, except where otherwise stated or unless otherwise agreed in writing by the MMO.

(2) The licensed activities must be carried out in accordance with the plans, protocols, statements, schemes and details approved under condition 20, unless otherwise agreed in writing by MMO.

### **Underwater Sound Management Strategy**

22.—(1) No driven or part-driven piling activities shall commence or low order UXO clearance can take place until an underwater sound management strategy for those activities, which accords with the outline underwater sound management strategy, has been submitted to, and approved in writing, by the MMO in consultation with the relevant statutory nature conservation body.

(2) The underwater sound management strategy submitted under sub-paragraph (1) must include details of the noise mitigation systems and/or noise abatement system that will be utilised to

manage sound from driven or part-driven piling activities (or low order UXO clearance unless otherwise agreed in writing by the MMO).

(3) No driven or part-driven piling activities or low order UXO clearance may be undertaken between 15 February to 31 March (inclusive) of any year, unless the MMO provides written confirmation to the undertaker beforehand that such works can take place in all or in a specified part of the Order limits during this period or part of this period.

(4) In considering whether to provide the confirmation referred to in sub-paragraph (3) above, the MMO shall have regard to any report or reports provided to the MMO by or on behalf of the undertaker relating to such matters as additional baseline information, reduced spatial restrictions, piling management measures, installation techniques or noise propagation modelling.

(5) The underwater sound management strategy must be submitted to the MMO no later than six months prior to the commencement of the relevant activities unless otherwise agreed in writing by the MMO.

(6) The driven or part-driven piling activities and low order UXO clearance must be carried out in accordance with the approved underwater sound management strategy, unless otherwise agreed in writing by the MMO.

### **Low order unexploded ordnance clearance**

**23.**—(1) No low order unexploded ordnance clearance can take place until the following have been submitted to and approved in writing by the MMO in consultation with the relevant statutory nature conservation body and, in respect of the method statement, the MCA—

- (a) a method statement for low order unexploded ordnance clearance which must include—
  - (i) methodologies for—
    - (aa) identification and investigation of potential unexploded ordnance targets;
    - (bb) low order unexploded ordnance clearance; and
    - (cc) removal and disposal of large debris;
  - (ii) a plan showing the area in which clearance activities are proposed to take place;
  - (iii) a programme of works; and
  - (iv) any exclusion zones/ environmental micro-siting requirements;
- (b) a marine mammal mitigation protocol in accordance with the outline marine mammal mitigation protocol, the intention of which is to prevent injury to marine mammals, following current best practice as advised by the relevant statutory nature conservation body.

(2) The method statement and the marine mammal mitigation protocol must be submitted to the MMO for approval at least six months prior to the date on which it is intended for low order unexploded ordnance clearance activities to begin unless otherwise agreed in writing with the MMO.

(3) Any low order unexploded ordnance clearance activities must be undertaken in accordance with the method statement and marine mammal mitigation protocol approved under sub-paragraph (1).

(4) Subject to sub-paragraph (5), an unexploded ordnance close out report must be submitted to the MMO and the relevant statutory nature conservation body within six months following the end of the low order unexploded ordnance clearance activity and must include the following for each clearance undertaken—

- (a) co-ordinates, depth, current speed, charge utilised and the date and time of each clearance; and
- (b) whether any mitigation was deployed including feedback on practicalities of deployment of equipment and efficacy of the mitigation where reasonably practicable, or justification if this information is not available.

(5) Should there be more than one low order unexploded ordnance clearance activity, the report required under sub-paragraph (4) will be provided at intervals agreed with the MMO.

(6) The total number of low order unexploded ordnance clearance as part of the authorised scheme in this licence and the authorised scheme in licence 1 taken together must not exceed 13 (whether undertaken under this licence or licence 1).

(7) No high order unexploded ordnance clearance is permitted by this marine licence.

### **Marine Noise Registry**

24.—(1) In the event that driven or part-driven pile foundations are proposed to be used as part of the foundation installation the undertaker must provide the following information to the Marine Noise Registry—

- (a) no less than six months prior to the commencement of each stage of construction of the licensed activities, information on the expected location, start and end dates of impact pile driving to satisfy the Marine Noise Registry's Forward Look requirements,
- (b) within two weeks after commencement of each stage of construction of the licensed activities, information on the location, start and end dates of impact pile driving to satisfy the Marine Noise Registry's Forward Look requirements;
- (c) at six month intervals following the commencement of pile driving, information on the locations and dates of impact pile driving to satisfy the Marine Noise Registry's Close Out requirements by 7 April for winter season October – March inclusive and 7 October for summer season April – September inclusive or within 12 weeks of completion of impact pile driving whichever is earlier.

(2) Within 12 weeks of the completion of pile driving the undertaker must submit information on the locations and dates of those activities to satisfy the Close Out requirements.

(3) The undertaker must notify MMO of the successful submission of Forward Look or Close Out information pursuant to sub-paragraphs (1) to (3) above within seven days of the submissions to the Marine Noise Registry.

(4) For the purpose of this condition—

- (a) “Marine Noise Registry” means the database of impulsive noise generating activities in UK seas maintained by Joint Nature Conservation Committee;
- (b) “Forward Look” and “Close Out” requirements are as set out in the ‘UK Marine Noise Registry: Information Document, Version 1 (May 2016)’ or any updated information document.

### **Offshore safety management**

25. No part of the authorised scheme may commence until the MMO, in consultation with the MCA, has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that stage of the project, adequately addressed all MCA recommendations as appropriate to the authorised scheme contained within MGN654 “Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” (or any equivalent guidance that replaces or supersedes it) and its annexes.

### **Reporting of engaged agents, contractors and vessels**

26.—(1) The undertaker must provide the following information in writing to the MMO, unless otherwise agreed in writing by the MMO—

- (a) the name, function, company number (if applicable), registered or head office address (as appropriate) of any agent or contractor appointed to engage in the licensed activities within seven days of appointment; and
- (b) each week during the construction of the authorised scheme a completed Hydrographic Note H102 listing the vessels currently and to be used in relation to the licensed activities.

(2) The undertaker must notify the MMO in writing of any vessel being used to carry on any licensed activity listed in this licence on behalf of the undertaker. Such notification must be received by the MMO no less than 24 hours before the commencement of the licensed activity. Notification must include the master's name, vessel type, vessel IMO number and vessel owner or operating company

(3) Any changes to the supplied details must be notified to the MMO in writing at least 24 hours before the agent, contractor or vessel engages in the licensed activities.

### **Pre-construction monitoring and surveys**

27.—(1) The undertaker must, in discharging condition 20(1)(c) submit a monitoring plan or plans in accordance with the offshore in principle monitoring plan for written approval by the MMO in consultation with the relevant statutory nature conservation body, which must contain details of proposed monitoring and surveys, including methodologies and timings, and a proposed format and content for a pre-construction baseline report.

(2) The survey proposals submitted under sub-paragraph (1) must be in general accordance with the principles set out in the offshore in principle monitoring plan and must specify each survey's objectives and explain how it will assist in either informing a useful and valid comparison with the post-construction position or will enable the validation or otherwise of key predictions in the environmental statement.

(3) The baseline report proposals submitted under sub-paragraph (1) must ensure that the outcome of the agreed surveys, together with existing data and reports, are drawn together to present a valid statement of the pre-construction position, with any limitations, and must make clear what post-construction comparison is intended and the justification for this being required.

(4) The pre-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to undertake a swath-bathymetry survey to IHO Order 1a standard that meets the requirements of MGN654 and its supporting Hydrographic Guidelines for Offshore Renewable Energy Developers, which includes the requirement for the full density data and reports to be delivered to the MCA and the UKHO for the update of nautical charts and publications and side scan sonar, of the area(s) within the Order limits in which it is proposed to carry out construction works including an appropriate buffer around the location of each work.

(5) The undertaker must carry out the surveys specified within the monitoring plan or plans in accordance with that plan or plans, unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

### **Construction monitoring**

28.—(1) The undertaker must, in discharging condition 20(1)(c) for each stage of construction, submit details (which accord with the offshore in principle monitoring plan) for approval in writing by the MMO in consultation with the relevant statutory nature conservation bodies of any proposed monitoring, including methodologies and timings, to be carried out during the construction of the authorised scheme. The monitoring proposals must specify each monitoring proposal's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.

(2) The construction monitoring must include:

- (a) marine traffic monitoring in accordance with the offshore in principle monitoring plan, including the provision of reports on the results of that monitoring at the end of each year of the construction period to the MMO, MCA and Trinity House;
- (b) in the event that driven or part-driven pile foundations are proposed, measurements of underwater sound generated by the installation of the first four piled foundations of each piled foundation type to be installed collectively under this licence and licence 1 unless the MMO otherwise agrees in writing; and

- (c) in the event that driven or part-driven pile foundations are proposed, measurements of underwater sound generated by the installation of the first two piled foundations where it is anticipated hammer energies greater than 3,000kJ may be required for installation, unless the MMO otherwise agrees in writing.
- (3) In the event that piled foundations are proposed to be used, the details submitted in accordance with the marine mammal mitigation protocol must include proposals for monitoring marine mammals.
- (4) The undertaker must carry out the monitoring approved under sub-paragraph (1), including any further underwater sound monitoring required in writing by the MMO, and provide the agreed reports in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.
- (5) The results of the initial underwater sound measurements monitored in accordance with sub-paragraph (2)(b) must be provided to the MMO within six weeks of the installation of the first four piled foundations. The assessment of this report by the MMO will determine whether any further underwater sound monitoring is required. If, in the reasonable opinion of the MMO in consultation with the relevant statutory nature conservation body, the assessment shows significantly different underwater sound modelling results to those assessed in the environmental statement or failures in mitigation, all piling activity must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.
- (6) The results of the any underwater sound measurements monitored in accordance with sub-paragraph (2)(c) must be provided to the MMO within six weeks of the installation of the first two piled foundations that exceed 3,000kJ of hammer energy. The assessment of this report by the MMO will determine whether any further underwater sound monitoring is required. If, in the reasonable opinion of the MMO in consultation with the relevant statutory nature conservation body, the assessment shows significantly different underwater sound modelling results to those assessed in the environmental statement or failures in mitigation, any piling activity where the hammer energy is anticipated to exceed 3,000kJ must cease until an update to the marine mammal mitigation protocol and further monitoring requirements have been agreed.
- (7) The undertaker must carry out the surveys specified in the offshore monitoring plan in accordance with that plan, including any further underwater sound monitoring required in writing by the MMO under sub-paragraph (4), unless otherwise agreed in writing by the MMO in consultation with the relevant statutory nature conservation body.

### **Post-construction monitoring**

- 29.—(1) The undertaker must, in discharging condition 20(1)(c) submit details (which accord with the offshore in principle monitoring plan) for approval in writing by the MMO in consultation with relevant statutory nature conservation bodies of proposed post-construction monitoring, including methodologies and timings, and a proposed format, content and timings for providing reports on the results.
- (2) The monitoring proposals must specify each monitoring proposal's objectives and explain how it will assist in either informing a useful and valid comparison with the pre-construction position and/or will enable the validation or otherwise of key predictions in the environmental statement.
- (3) The post-construction monitoring referred to in sub-paragraph (1) must, unless otherwise agreed in writing with the MMO, have due regard to, but not be limited to, the need to:
  - (a) undertake, within 12 months of completion of construction of the authorised scheme, a full sea floor coverage swath-bathymetry survey to IHO Order 1a standard that meets the requirements of MGN 654 and its supporting Hydrographic Guidelines for Offshore Renewable Energy Developers which includes the requirement for the full density data and reports to be delivered to the MCA and the UKHO for the update of nautical charts and publications, and side scan sonar, of the area(s) within the Order limits in which construction works were carried out to assess any changes in bedform topography and such further monitoring or assessment as may be agreed to ensure that cables (including fibre optic cables) have been buried or protected; and

- (b) undertake post-construction marine traffic monitoring in accordance with the offshore in principle monitoring plan, including the provision of reports on the results of that monitoring to the MMO, MCA and Trinity House.
- (4) The undertaker must carry out the monitoring agreed under sub-paragraph (1) and provide the agreed reports to the MMO in the agreed format in accordance with the agreed timetable, unless otherwise agreed in writing with the MMO in consultation with the relevant statutory nature conservation bodies.
- (5) Following the installation of cables, details of cable monitoring required under 20(1)(d)(i) must be updated with the results of the post installation surveys.

### **Reporting of scour and cable protection**

**30.**—(1) Not more than four months following completion of the construction of the authorised scheme, the undertaker must provide the MMO and the relevant statutory nature conservation bodies with a report setting out details of the cable protection and scour protection used for the authorised scheme.

(2) The report must include the following information—

- (a) the location of cable protection and scour protection;
- (b) the volume of cable protection and scour protection; and
- (c) any other information relating to the cable protection and scour protection as agreed between the MMO and the undertaker.

(3) Any cable protection (other than the replenishment or replacement of existing cable protection) authorised under this licence must be deployed within 10 years from the date of completion of construction (as reported in the close-out report under condition 31) unless otherwise agreed by the MMO in writing.

### **Completion of construction**

**31.**—(1) The undertaker must submit a close-out report to the MMO, MCA, Trinity House, the UKHO and the relevant statutory nature conservation body within four months of the date of completion of construction. The close out report must confirm the date of completion of construction and must include the following details—

- (a) the final number of installed offshore substation platforms;
- (b) the installed offshore substation platform parameters;
- (c) as built plans;
- (d) latitude and longitude coordinates of the centre point of the location for each offshore substation platform provided as Geographical Information System data referenced to WGS84 datum; and
- (e) latitude and longitude coordinates of the interconnector cables provided as Geographical Information System data referenced to WGS84 datum.

(2) Following completion of construction, no further construction activities can be undertaken under this licence.

### **Requirement for written approval**

**32.** Where under any of the above conditions the approval or agreement of the MMO is required, that approval or agreement must be given in writing.



## SCHEDULE 5

Article 11

### Documents to be certified

1. The following documents are the list referred to in article 11—

**Table 4**

| <i>Document Reference Number</i> | <i>Examination Library Reference</i> | <i>Document Name</i>                                                  | <i>Version</i> | <i>Date</i>   |
|----------------------------------|--------------------------------------|-----------------------------------------------------------------------|----------------|---------------|
| Plans and Drawings               |                                      |                                                                       |                |               |
| B2                               | APP-081                              | Order Limits and Grid Coordinates Plan                                | F01            | April 2024    |
| B3                               | APP-082                              | Works plan                                                            | F01            | April 2024    |
| Environmental Statement          |                                      |                                                                       |                |               |
| F1                               | APP-095                              | Non-technical summary                                                 | F01            | April 2024    |
| F1.1                             | APP-008                              | Volume 1, Chapter 1<br>Introduction and overarching glossary          | F01            | April 2024    |
| F1.2                             | APP-009                              | Volume 1, Chapter 2:<br>Policy and legislative context                | F01            | April 2024    |
| S_D6_15                          | REP6-024                             | Volume 1, Chapter 3:<br>Project description                           | F02            | February 2025 |
| F1.4                             | APP-011                              | Volume 1, Chapter 4: Site selection and consideration of alternatives | F01            | April 2024    |
| F1.5                             | APP-012                              | Volume 1, Chapter 5:<br>Environmental impact assessment methodology   | F01            | April 2024    |
| S_D6_16                          | REP6-026                             | Volume 2, Chapter 1:<br>Physical processes                            | F02            | February 2025 |
| S_D6_17                          | REP6-028                             | Volume 2, Chapter 2:<br>Benthic subtidal ecology                      | F02            | February 2025 |
| S_D6_18                          | REP6-030                             | Volume 2, Chapter 3: Fish and shellfish ecology                       | F02            | February 2025 |

|         |          |                                                                            |     |               |
|---------|----------|----------------------------------------------------------------------------|-----|---------------|
| S_D6_19 | REP6-031 | Volume 2,<br>Chapter 4:<br>Marine<br>mammals                               | F04 | February 2025 |
| S_D6_20 | REP6-033 | Volume 2,<br>Chapter 5:<br>Offshore<br>ornithology                         | F02 | February 2025 |
| F2.6    | APP-024  | Volume 2,<br>Chapter 6:<br>Commercial<br>fisheries                         | F01 | April 2024    |
| S_D6_21 | REP6-034 | Volume 2,<br>Chapter 7:<br>Shipping and<br>navigation                      | F02 | February 2025 |
| F2.8    | APP-026  | Volume 2,<br>Chapter 8:<br>Marine<br>archaeology and<br>cultural heritage  | F01 | April 2024    |
| S_D6_22 | REP6-035 | Volume 2,<br>Chapter 9: Other<br>sea users                                 | F02 | February 2025 |
| S_D6_23 | REP6-036 | Volume 2,<br>Chapter 10:<br>Seascape,<br>landscape and<br>visual resources | F02 | February 2025 |
| F2.11   | APP-015  | Volume 2,<br>Chapter 11:<br>Aviation and<br>radar                          | F01 | April 2024    |
| F2.12   | APP-016  | Volume 2,<br>Chapter 12:<br>Climate change                                 | F01 | April 2024    |
| S_D6_24 | REP6-037 | Volume 2,<br>Chapter 13:<br>Socio-economics                                | F02 | February 2025 |
| F2.14   | APP-018  | Volume 2,<br>Chapter 14:<br>Human health<br>assessment                     | F01 | April 2024    |
| F2.15   | APP-019  | Volume 2,<br>Chapter 15:<br>Inter-related<br>effects                       | F01 | April 2024    |
| F3.3.1  | APP-028  | Volume 3 Annex<br>3.1: Underwater<br>sound technical<br>report             | F01 | April 2024    |
| F3.3.2  | APP-029  | Volume 3 Annex<br>3.2: Sulphur<br>hexafluoride<br>report                   | F01 | April 2024    |

|         |          |                                                                                                   |     |               |
|---------|----------|---------------------------------------------------------------------------------------------------|-----|---------------|
| F3.3.3  | APP-030  | Volume 3 Annex 3.3: Scoping opinion                                                               | F01 | April 2024    |
| F3.5.1  | APP-031  | Volume 3 Annex 5.1: Cumulative effects screening matrix                                           | F01 | April 2024    |
| F3.5.2  | APP-032  | Volume 3 Annex 5.2: Transboundary impacts screening                                               | F01 | April 2024    |
| F4.1.1  | APP-033  | Volume 4 Annex 1.1: Physical processes technical report                                           | F01 | April 2024    |
| F4.2.1  | APP-050  | Volume 4 Annex 2.1: Benthic subtidal ecology technical report                                     | F01 | April 2024    |
| F4.3.1  | APP-051  | Volume 4 Annex 3.1: Fish and shellfish ecology technical report                                   | F01 | April 2024    |
| F4.4.1  | APP-052  | Volume 4 Annex 4.1: Marine mammals technical report                                               | F01 | April 2024    |
| S_D1_11 | REP1-026 | Volume 4 Annex 5.1: Offshore ornithology baseline characterisation                                | F02 | October 2024  |
| F4.5.2  | APP-054  | Volume 4 Annex 5.2: Offshore ornithology displacement technical report                            | F01 | April 2024    |
| S_D6_25 | REP6-038 | Volume 4 Annex 5.3: Offshore ornithology collision risk modelling technical report                | F02 | February 2025 |
| F4.5.4  | APP-056  | Volume 4 Annex 5.4: Offshore ornithology migratory bird collision risk modelling technical report | F01 | April 2024    |
| S_D6_26 | REP6-039 | Volume 4 Annex 5.5: Offshore ornithology apportioning technical report                            | F02 | February 2025 |

|         |          |                                                                                                       |     |               |
|---------|----------|-------------------------------------------------------------------------------------------------------|-----|---------------|
| F4.5.6  | APP-058  | Volume 4 Annex 5.6: Offshore ornithology PVA technical report                                         | F01 | April 2024    |
| S_D6_27 | REP6-040 | Volume 4 Annex 6.1: Commercial fisheries technical report                                             | F02 | February 2025 |
| S_D6_28 | REP6-041 | Volume 4 Annex 7.1: Navigational risk assessment                                                      | F02 | February 2025 |
| F4.8.1  | APP-061  | Volume 4 Annex 8.1: Marine archaeology technical report                                               | F01 | April 2024    |
| F4.8.2  | APP-062  | Volume 4 Annex 8.2: Cultural heritage assessment                                                      | F01 | April 2024    |
| F4.9.1  | APP-063  | Volume 4 Annex 9.1: Radar early warning systems technical report                                      | F01 | April 2024    |
| F4.10.1 | APP-034  | Volume 4 Annex 10.1: Seascape, landscape and visual resources legislation and planning policy context | F01 | April 2024    |
| F4.10.2 | APP-035  | Volume 4 Annex 10.2: Seascape and landscape character baseline technical report                       | F01 | April 2024    |
| F4.10.3 | APP-036  | Volume 4 Annex 10.3: Visual baseline technical report                                                 | F01 | April 2024    |
| F4.10.4 | APP-037  | Volume 4 Annex 10.4: Seascape, landscape and visual resources impact assessment methodology           | F01 | April 2024    |
| F4.10.5 | APP-038  | Volume 4 Annex 10.5: International and nationally designated landscape study                          | F01 | April 2024    |
| F4.10.6 | APP-039  | Volume 4 Annex 10.6: Seascape visualisations                                                          | F01 | April 2024    |

|          |                              |                                                                              |     |             |
|----------|------------------------------|------------------------------------------------------------------------------|-----|-------------|
|          |                              | Part 1 (Figures 1.1 – 9.1)                                                   |     |             |
| F4.10.6  | APP-040                      | Volume 4 Annex 10.6: Seascape visualisations<br>Part 2 (Figures 10.1 – 16.3) | F01 | April 2024  |
| F4.10.6  | APP-041                      | Volume 4 Annex 10.6: Seascape visualisations<br>Part 3 (Figures 16.4 – 25)   | F01 | April 2024  |
| F4.10.6  | APP-042                      | Volume 4 Annex 10.6: Seascape visualisations<br>Part 4 (Figures 26 – 43)     | F01 | April 2024  |
| F4.10.6  | APP-043                      | Volume 4 Annex 10.6: Seascape visualisations<br>Part 5 (Figures 44 – 61)     | F01 | April 2024  |
| F4.10.6  | APP-044                      | Volume 4 Annex 10.6: Seascape visualisations<br>Part 6 (Figures 62 – 74)     | F01 | April 2024  |
| F4.11.1  | APP-045                      | Volume 4, Annex 11.1: Aviation and radar technical report                    | F01 | April 2024  |
| F4.12.1  | APP-046                      | Volume 4, Annex 12.1: Technical greenhouse gas assessment                    | F01 | April 2024  |
| F4.12.2  | APP-047                      | Volume 4, Annex 11.2: Climate change risk assessment                         | F01 | April 2024  |
| F4.13.1  | APP-048                      | Volume 4, Annex 13.1: Socio-economics technical impact report                | F01 | April 2024  |
| F4.14.1  | APP-049                      | Volume 4, Annex 14.1: Airborne construction sound technical report           | F01 | April 2024  |
| S_PD_3.7 | PD1-012, PD1-013 and PD1-014 | Annex 3.7 to the Applicant's response to Relevant                            | F01 | August 2024 |

|          |          |                                                                                                                                       |     |               |
|----------|----------|---------------------------------------------------------------------------------------------------------------------------------------|-----|---------------|
|          |          | Representations from Natural England [Seascape, landscape and visual impact assessment]                                               |     |               |
| S_PD_3.9 | PD1-016  | Annex 3.9 to the Applicant's response to Relevant Representations from Natural England [Offshore ornithology]                         | F01 | August 2024   |
| S_D1_4.5 | REP1-010 | Annex 4.5 to Response to Hearing Action Point 15: Offshore Ornithology CEA and In-combination Gap-filling of Historical Projects Note | F01 | October 2024  |
| S_D1_4.6 | REP1-011 | Displacement Rates Clarification Note [Offshore ornithology]                                                                          | F01 | October 2024  |
| S_D1_4.8 | REP1-013 | Annex 4.8 to Response to Hearing Action Point 15: Great Orme Head SSSI Clarification Note                                             | F01 | October 2024  |
| S_D2_13  | REP2-021 | Treatment of Birds in Flight Data in Abundance Estimation                                                                             | F01 | October 2024  |
| S_D2_14  | REP2-022 | Great black-backed gull regional populations                                                                                          | F01 | October 2024  |
| S_D2_15  | REP2-023 | Review of Cumulative Effects Assessment and In-Combination Assessment                                                                 | F01 | October 2024  |
| S_D3_4.4 | REP3-010 | Annex 4.4 to the Applicant's                                                                                                          | F01 | November 2024 |

|           |          |                                                                                                                                                                       |     |               |
|-----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------|
|           |          | response to<br>EXQ1: SLVIA<br>Clarification<br>note                                                                                                                   |     |               |
| S_D3_9    | REP3-018 | Inclusion of<br>Awel y Môr in<br>Cumulative<br>Assessments –<br>Clarification<br>note                                                                                 | F01 | November 2024 |
| S_D3_10   | REP3-019 | Review of<br>Cumulative<br>Effects<br>Assessment and<br>In-Combination<br>Assessment:<br>Offshore<br>ornithology                                                      | F01 | November 2024 |
| S D4 6.1  | REP4-010 | Annex 6.1 to the<br>Applicant's<br>response to<br>Written<br>Representations<br>from MMO at<br>Deadline 3: Cod<br>spawning period<br>[Fish and<br>shellfish]          | F01 | December 2024 |
| S_D4_14   | REP4-023 | Greenhouse Gas<br>(GHG)<br>Reduction<br>Strategy                                                                                                                      | F01 | December 2024 |
| S_D4_15   | REP4-024 | Review of<br>Cumulative<br>Effects<br>Assessment and<br>In-Combination<br>Assessment:<br>Morgan and<br>Morecambe<br>Offshore Wind<br>Farms:<br>Transmission<br>Assets | F01 | December 2024 |
| S_D5_15   | REP5-031 | Additional PVA<br>Modelling for<br>Great Black-<br>Backed Gull<br>Cumulative<br>Assessment<br>[Offshore<br>ornithology]                                               | F01 | January 2025  |
| S_D5_16.1 | REP5-032 | Annex 16.1 to<br>Ornithological<br>assessment<br>clarification data                                                                                                   | F01 | January 2025  |



|            |          |                                                                                                                                |     |               |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------|-----|---------------|
|            |          | English sites                                                                                                                  |     |               |
| S_D5a_16.2 | AS-013   | Annex 16.2 to Ornithological assessment clarification data Welsh sites                                                         | F02 | January 2025  |
| S_D5_16.3  | REP5-034 | Annex 16.3 to Ornithological assessment clarification data offshore sites                                                      | F01 | January 2025  |
| S_D5_16    | REP5-035 | Ornithological assessment clarification data                                                                                   | F01 | January 2025  |
| S_D6_3.3   | REP6-007 | Helicopter Access Additional Flight Data                                                                                       | F01 | February 2025 |
| S_D6_3.4   | REP6-008 | Helicopter Access Additional Meteorological Analysis                                                                           | F01 | February 2025 |
| S_D6_29    | REP6-042 | Review of Cumulative Effects Assessment and In-Combination Assessment at Deadline 6                                            | F01 | February 2025 |
| S_D6_37.1  | REP6-057 | Appendix to Ornithological assessment clarification data (REP5-035) - Explanatory note to support SNCB and Applicant workbooks | F01 | February 2025 |
| S_D6_37.2  | REP6-058 | Annex 16.4 to Ornithological assessment clarification data (REP5-035) - Applicant's parameters (English sites)                 | F01 | February 2025 |
| S_D6_37.3  | REP6-059 | Annex 16.5 to Ornithological assessment clarification data (REP5-035) - Applicant's parameters (Welsh and                      | F01 | February 2025 |

|                 |          |                                                                                               |     |               |
|-----------------|----------|-----------------------------------------------------------------------------------------------|-----|---------------|
|                 |          | offshore sites)                                                                               |     |               |
| S_D6_39         | REP6-061 | Population Viability Analysis for the Regional Population of Guillemot [Offshore ornithology] | F01 | February 2025 |
| S_D6_40         | REP6-062 | Project alone and cumulative assessment for the Great Orme's Head SSSI [Offshore ornithology] | F02 | February 2025 |
| S_D6_41         | REP6-063 | Technical Note: Calculation of the Net Effects on Greenhouse Gas Emissions                    | F02 | February 2025 |
| S_D7_3.1        | REP7-005 | Annex 3.1 Warton Aerodrome CNS Safeguarding Assessment Report                                 | F01 | March 2025    |
| Other Documents |          |                                                                                               |     |               |
| S_D4_11         | REP4-018 | Outline Offshore Environmental Management Plan                                                | F01 | December 2024 |
| S_D4_22         | REP4-032 | Outline offshore construction method statement                                                | F01 | December 2024 |
| S_D5_19         | REP5-039 | Outline offshore written scheme of investigation for archaeology                              | F02 | January 2025  |
| S_D6_30.1       | REP6-045 | Outline underwater sound management strategy                                                  | F04 | February 2025 |
| S_D5_23         | REP5-046 | Measures to minimise disturbance to marine mammals and rafting birds from transiting vessels  | F02 | January 2025  |
| S_D6_31         | REP6-047 | Outline marine mammal mitigation protocol                                                     | F04 | February 2025 |

|         |          |                                                  |     |               |
|---------|----------|--------------------------------------------------|-----|---------------|
| S_D6_32 | REP6-049 | Outline offshore operations and maintenance plan | F02 | February 2025 |
| S_D6_33 | REP6-051 | Commitments Register                             | F05 | February 2025 |
| S_D6_34 | REP6-054 | Offshore in-principle monitoring plan            | F02 | February 2025 |
| S_D6_35 | REP6-055 | Outline vessel traffic management plan           | F04 | February 2025 |
| S_D6_45 | REP6-069 | Outline fisheries liaison and co-existence plan  | F06 | February 2025 |

### **EXPLANATORY NOTE**

*(This note is not part of the Regulations)*

This Order grants development consent for, and authorises the construction, operation and maintenance of an offshore wind farm generating station located approximately 36km from the North-West coast of England, together with associated development. This Order imposes requirements in connection with the development.

A copy of the plans referred to in this Order and certified in accordance with article 11 (certification of plans, etc.) may be inspected free of charge at the offices of Lancashire County Council, County Hall, Fishergate, Preston, Lancashire, PR1 8XJ.