

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Report on Interrelationships with Other Infrastructure Projects

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Image of an offshore wind farm

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

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MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Contents

1	REPORT ON INTERRELATIONSHIPS WITH OTHER INFRASTRUCTURE PROJECTS.....	1
1.1	Introduction	1
1.1.1	Background	1
1.1.2	Structure of this report.....	4
1.1.3	Report revisions	4
1.2	Overview of the Morgan Generation Assets development timeframes in relation to other projects	4
1.3	Approach taken by the Applicant to coordinate the Morgan Generation Assets with the other projects	8
1.3.1	Overview	8
1.3.2	Alignment meetings.....	9
1.3.3	Coordinated consultation	9
1.3.4	Coordinated assessments.....	11
1.4	Any provisions in the Development Consent Order required for the Morgan Generation Assets to be implemented satisfactorily in relation to other projects.....	13
1.4.1	General.....	13
1.4.2	Morgan Generation Assets and Morgan and Morecambe Offshore Wind Farms: Transmission Assets	13
1.5	Key survey data shared with other projects	14
1.6	Mitigation measures shared with other projects, and how they are to be secured	21
1.7	Summary of cumulative impacts of the Morgan Generation Assets with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the Morecambe Offshore Windfarm: Generation Assets and approach to avoidance of stranded assets	21
1.7.1	Summary of cumulative impacts	21
1.8	Approach to avoidance of stranded assets	37
1.9	Summary of information relied on for the cumulative effects assessment and any changes since submission, including a summary of any changes	37
1.10	Summary of progress of coordination with the other projects	42
1.11	References	43

Tables

Table 1.1:	Project consenting timeframes.	6
Table 1.2:	Indicative project construction and operation programmes.....	7
Table 1.3:	Summary of approach taken to coordinate with other projects.	8
Table 1.4:	Survey data shared between the Morgan Generation Assets and Mona Offshore Wind Project.	15
Table 1.5:	Survey data shared between the Morgan Generation Assets and Morgan and Morecambe Offshore Wind Farms: Transmission Assets.	15
Table 1.6:	Survey data shared between the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and Morecambe Offshore Windfarms: Generation Assets.	18
Table 1.7:	Summary of cumulative assessments for Scenario 1 as presented within the Morgan Generation Assets application.....	23
Table 1.8:	Summary of cumulative assessments for Scenario 2 as presented within the Morgan Generation Assets application.....	30
Table 1.9:	Information relied on for the Morgan Generation Assets CEA at the time of the application (April 2024).....	39
Table 1.10:	Updated information available in the public domain at Deadline 1.	40
Table 1.11:	Updated information available in the public domain at Deadline 4.	40
Table 1.12:	Updated information available in the public domain at Deadline 6.	41

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Figures

Figure 1.1: Order limits of the Morgan Generation Assets with other infrastructure projects..... 3

Appendices

APPENDIX A: SURVEY DATA COLLECTED 44

1 REPORT ON INTERRELATIONSHIPS WITH OTHER INFRASTRUCTURE PROJECTS

1.1 Introduction

1.1.1 Background

1.1.1.1 On 5 August 2024 the Examining Authority (ExA) published the Rule 6 letter (PD-001) regarding the Examination of the Morgan Offshore Wind Project: Generation Assets (hereafter referred to as the 'Morgan Generation Assets').

1.1.1.2 The Rule 6 letter sets out a requirement for Morgan Offshore Wind Limited ('the Applicant') to prepare a report on the interrelationships with other infrastructure projects. This requirement is in recognition of the number of other infrastructure projects within and around the Irish Sea which are either consented, in Examination or pre-Examination, or pre-Application, which are listed in the Rule 6 letter as including:

- Mona Offshore Wind Project
- Morecambe Offshore Windfarm: Generation Assets
- Morgan and Morecambe Offshore Wind Farms: Transmission Assets
- Mooir Vannin Offshore Wind Farm
- Awel y Mor Offshore Wind Farm.

1.1.1.3 The order limits of the Morgan Generation Assets together with those for the other infrastructure projects, including the array areas, cable routes and onshore grid connections are shown in Figure 1.1.

1.1.1.4 The ExA has noted that there are a number of overlapping issues associated with these projects, and the importance of considering cumulative and in-combination effects with other offshore wind farms and associated grid connection projects. The ExA has also recognised the potential for the information available on these other projects to change during the Examination.

1.1.1.5 In preparing this report, the Applicant defines 'interrelationship' as 'the way in which two or more things or people are connected and affect each other'.

1.1.1.6 The approach to coordination between the Morgan Generation Assets and the other projects listed above is set out and evidenced in this report where appropriate. The Applicant is delivering a coordinated grid connection with the Morecambe Offshore Windfarm: Generation Assets, in line with National Policy Statements (NPS) EN-1, EN-3 and EN-5, with coordination carried out with other relevant projects as far as reasonably practicable and appropriate given the varying project timelines. A coordinated approach to stakeholder consultation was undertaken with key projects at the outset and continued throughout the pre-application phase. Where appropriate, key survey data has been shared between the relevant projects to strengthen the individual environmental baselines, and where site-specific surveys have been carried out, these have followed standard practice and ensure that the evidence base upon which to carry out the assessments is similar.

1.1.1.7 Where relevant and as detailed in this report, the Environmental Impact Assessment (EIA) and Habitats Regulations Assessment (HRA) assessment approaches have been coordinated, and delivered by the same team of competent experts to ensure consistency. This has ensured a coordinated approach to each topic of the EIA across

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

the relevant projects, including alignment on approach to baseline data, assessment methodologies, impact assessment, cumulative impact assessment, and mitigation.

1.1.1.8 To address the change in status of the Morecambe Offshore Windfarm: Generation Assets and Morgan and Morecambe Offshore Wind Farms: Transmission Assets since the submission of the Morgan Generation Assets application, the Applicant carried out a review of its cumulative effects assessment (CEA) and in-combination assessment at Deadline 2 (REP2-023, with offshore ornithology included in REP3-019) and Deadline 4 (REP4-024) to establish whether the conclusions of the CEA and in-combination assessments remain current and robust. The outputs of the CEA review are included in this report where relevant.

1.1.1.9 Consequently, the Applicant is satisfied that the coordination carried out as detailed in this report is sufficient to ensure a robust evidence base upon which to establish and determine each application, and goes beyond that typically undertaken for proximate offshore wind projects. Publicly available information on all projects identified by the ExA (and any others relevant to the Morgan Generation Assets CEA) have been kept under review during the Morgan Generation Assets Examination and updates provided at appropriate deadlines.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

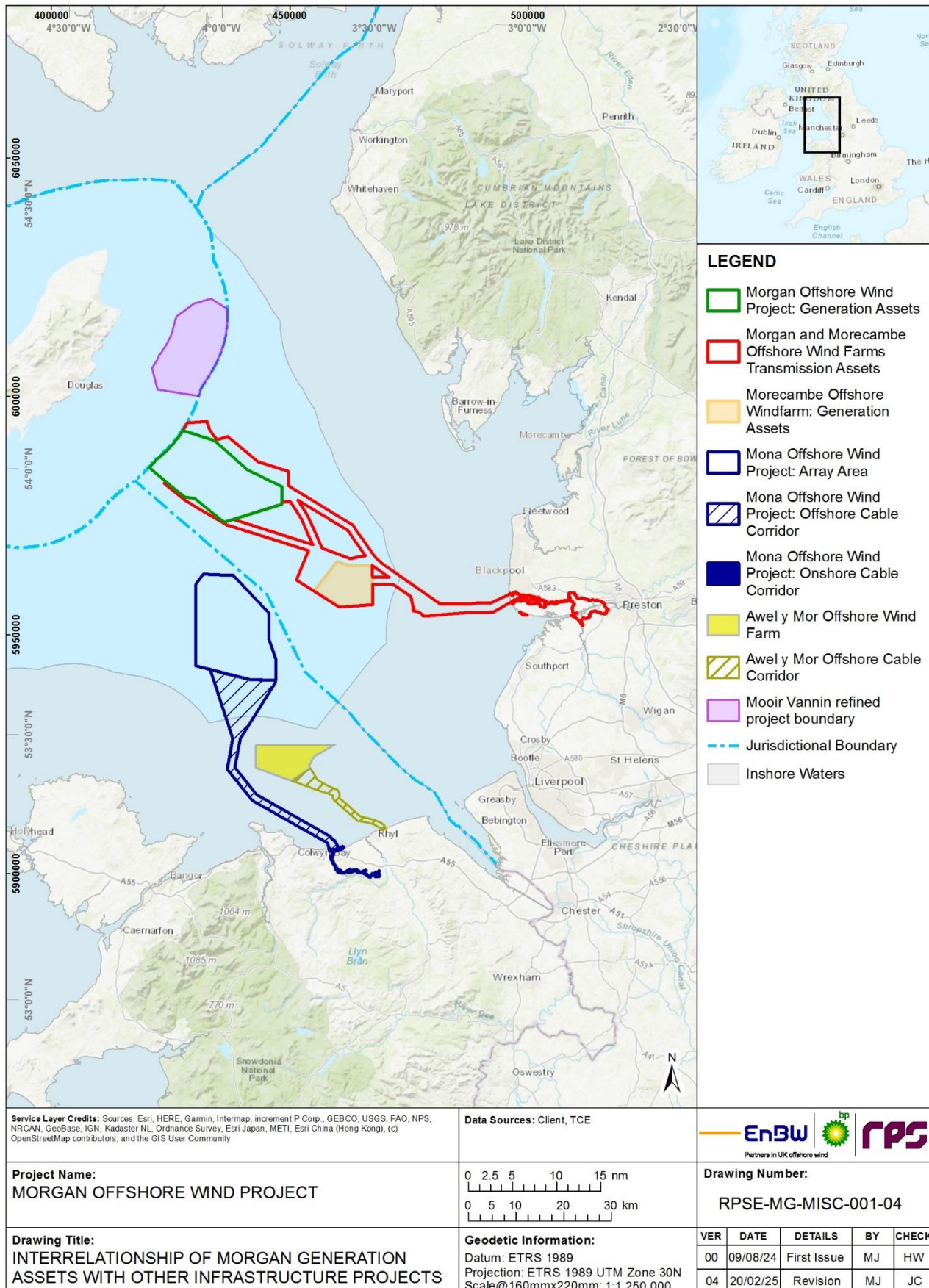


Figure 1.1: Order limits of the Morgan Generation Assets with other infrastructure projects.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

1.1.2 Structure of this report

1.1.2.1 The content of this report includes the matters set out within Appendix G of the Rule 6 letter, and is therefore structured as follows:

- Introduction (including a plan showing the order limits for the Morgan Generation Assets and the other projects and the locations of the main features of each)
- An overview of the Morgan Generation Assets and the other projects, including the timings for:
 - Submission (or current Examination)
 - Construction phasing
 - Grid connection
 - Expected start of operation.
- The approach taken by the Applicant to coordinate the Morgan Generation Assets with the other projects, including during the Examination
- Any provisions in the Development Consent Order required for the Morgan Generation Assets to be implemented satisfactorily in relation to other projects
- Key survey data shared with other projects
- Mitigation measures shared with other projects, and how they are to be secured
- Summary of direct, indirect, secondary and cumulative impacts with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets (Scenario 1) and the Morecambe Offshore Windfarm: Generation Assets (Scenario 2), approach to avoidance of stranded assets, and any potential conditions or requirements (with reference to Annex 1 of Natural England's Relevant Representation)
- A summary of any other information on the other projects relied on for the CEA, the level of detail, and any changes since the application was prepared for submission, including a summary of any changes
- A summary of progress of coordination with the other projects, setting out the matters that have been agreed, any inconsistencies or outstanding matters, and the next steps.

1.1.3 Report revisions

1.1.3.1 The initial version of this report was submitted at Deadline 1 (REP1-017), with further updates of the report submitted at Deadline 4 (REP4-016) (mid-Examination) and the final report submitted at Deadline 6 (S_D6_9) (end of Examination).

1.2 Overview of the Morgan Generation Assets development timeframes in relation to other projects

1.2.1.1 This section provides an overview of the development timeframes for the Morgan Generation Assets and the other infrastructure projects as follows:

- Table 1.1 provides the consenting timeframes, including dates for submission and Examination (where relevant)

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table 1.2 provides the timeframes for construction, grid connection and expected start of operation.

- 1.2.1.2 The projects are listed in ascending date order.
- 1.2.1.3 The Awel y Mor Offshore Wind Farm project was leased under The Crown Estate extension projects and is an extension to Gwynt y Mor. The Awel y Mor Offshore Wind Farm project was consented in September 2023.
- 1.2.1.4 The Mona Offshore Wind Project, Morgan Generation Assets, Morecambe Offshore Windfarm: Generation Assets, and Morgan and Morecambe Offshore Wind Farms: Transmission Assets are all leased under The Crown Estate Round 4 OWF leasing. The Mona Offshore Wind Project concluded its Examination on 16 January 2025. The Morgan Generation Assets and Morecambe Offshore Windfarm: Generation Assets Examinations are in progress, with the Morgan Generation Assets Examination due to conclude on 10 March 2025. The Morgan and Morecambe Offshore Wind Farms: Transmission Assets application was accepted for Examination on 18 November 2024, with the project in the pre-Examination phase.
- 1.2.1.5 The Moir Vannin Offshore Wind Farm is located in Isle of Man (IoM) Territorial Waters and is being taken forward as the first application in IoM Territorial Waters. Moir Vannin Offshore Wind Farm is currently at the pre-application stage, with only the Scoping Report, some early stage environmental information (pre-EIA) and an overview of project refinements following consultation publicly available. The developer of the Moir Vannin Offshore Wind Farm will require to apply to the Isle of Man Government for a Marine Infrastructure Consent (MIC). The Isle of Man Government (Territorial Sea Committee) has stated (see REP3-033) that it is continuing to prepare the necessary legislation and requirements to support the consideration of an application in respect of offshore renewable energy generation. Moir Vannin Offshore Wind Farm Limited has stated its aspiration to submit the application in March 2025 with a target of receiving consent approximately 18 months after submission (see REP3-041). The Applicant understands that a separate consent for the Moir Vannin transmission infrastructure (the 'East Irish Sea Transmission Project'), located within English waters, is in early-stage development. There is limited information in the public domain for this project except for the Section 35 Direction application that was granted on 24 October 2024 and associated supporting information, and location plans (REP5-070 to REP5-074).
- 1.2.1.6 Publicly available information on all projects identified by the ExA (and any others relevant to the Morgan Generation Assets CEA) have been kept under review during the Morgan Generation Assets Examination and updates provided at appropriate deadlines.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table 1.1: Project consenting timeframes.

Project	Status	Date Preliminary Environmental Information Report (PEIR) issued	Application submitted	Application Accepted for Examination	Date of commencement of Examination	Date of Examination Close	Consent Decision
Awel y Mor ^a	Consented	August 2021	20 April 2022	18 May 2022	20 September 2022	20 March 2023	Consent granted: 20 September 2023
Mona Offshore Wind Project ^a	Examination closed	19 April 2023	22 February 2024	27 March 2024	16 July 2024	16 January 2025	Anticipated 16 July 2025 ^b
Morgan Offshore Wind Project: Generation Assets ^a	Examination	19 April 2023	24 April 2024	17 May 2024	10 September 2024	10 March 2025	Anticipated 10 September 2025 ^b
Morecambe Offshore Windfarm: Generation Assets ^a	Examination	19 April 2023	31 May 2024	27 June 2024	23 October 2024	23 April 2025	Anticipated 10 October 2025 ^b
Morgan and Morecambe Offshore Wind Farms: Transmission Assets ^a	Pre-Examination	12 October 2023	21 October 2024	18 November 2024	TBC	TBC	TBC
Moor Vannin Generation Project ^c	Pre-Submission	N/A	TBC	N/A	N/A	N/A	TBC
Moor Vannin East Irish Sea Transmission Project ^d	Pre-Submission (early stage development)	N/A	TBC	N/A	N/A	N/A	TBC

^a Data source: The Planning Inspectorate website.

^b Dates estimated from statutory timescales for recommendation and decision (six months collectively from the close of Examination (section 98(3) and section 107(1) of the Planning Act 2008)), subject to Secretary of State power to extend the deadline under section 107(3) of the Planning Act 2008.

^c Data source: Developer website (<https://orsted.im/moorvannin/document-library>).

^d Data source: Moor Vannin Offshore Wind Farm Limited (REP3-041, REP5-077) and <https://assets.publishing.service.gov.uk/media/67112612386bf0964853d767/east-irish-sea-transmission-project-qualifying-request-s35-supporting-statement.pdf>

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table 1.2: Indicative project construction and operation programmes.

Project	Status	Indicative construction phase	Grid connection date*	Expected start of operation	Data source
Awel y Mor	Consented	2026 to 2029	2027	2030	Volume 3, Annex 5.1: Cumulative effects screening matrix (APP-031) National Grid (2024)
			2028**		
Mona Offshore Wind Project	Examination Closed	2026 to 2030	2029	2030	Mona Offshore Wind Ltd (2024) Volume 1, Chapter 3: Project description National Grid (2024)
Morgan Offshore Wind Project: Generation Assets	Examination	2026 to 2030	2029	2030	Volume 1, Chapter 3: Project description (APP-010) National Grid (2024)
Morecambe Offshore Windfarm: Generation Assets	Examination	2026 to 2029	2029	2030	Volume 3, Annex 5.1: Cumulative effects screening matrix (APP-031) National Grid (2024)
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Pre-Examination	Construction commencement 2026	2029	2030	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 1, Chapter 3: Project description. National Grid (2024)
Moor Vannin Generation Project	Pre-Submission	Q2 2030 to 2033	Unknown	2033	Volume 3, Annex 5.1: Cumulative effects screening matrix (APP-031) Ørsted (2024) Moor Vannin Offshore Wind Farm Limited (REP3-040, REP5-077)
Moor Vannin East Irish Sea Transmission Project	Pre-Submission (early stage development)	Q4 2029	Unknown	TBC	Moor Vannin Offshore Wind Farm Limited (REP3-041, REP5-077)

*Grid connection information taken from National Grid TEC register (National Grid, 2024).

**Grid connection is in two phases.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

1.3 Approach taken by the Applicant to coordinate the Morgan Generation Assets with the other projects

1.3.1 Overview

1.3.1.1 This section details the coordination approach taken by the Applicant to coordinate the Morgan Generation Assets with the Mona Offshore Wind Project, Morecambe Offshore Windfarm: Generation Assets and the Morgan and Morecambe Offshore Wind Farms: Transmission Assets, including:

- Alignment meetings
- Coordinated consultation
- Coordinated assessments.

1.3.1.2 The coordination approach is summarised in Table 1.3.

Table 1.3: Summary of approach taken to coordinate with other projects.

Coordination activity		Morgan Offshore Wind Project: Generation Assets	Mona Offshore Wind Project	Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Morecambe Offshore Windfarm: Generation Assets
Alignment meetings		✓	✓	✓	✓
Coordinated consultation		✓	✓	✓	✓
Coordinated assessments	EIA	✓	✓	✓	-
	HRA	✓	✓	✓	-
	Cumulative Regional Navigational Risk Assessment (CRNRA)	✓	✓	✓	✓
	Offshore Ornithology CEA and In-combination Gap-filling of Historical Projects	✓	✓	N/A	✓

1.3.1.3 Specific coordination with the Awel y Mor Offshore Wind Farm and the Mooir Vannin Offshore Wind Farm was not carried out due to the different project timelines associated with these projects. Awel y Mor Offshore Wind Farm was consented in September 2023 and Mooir Vannin Offshore Wind Farm is currently in the pre-application process. RWE Renewables UK and Ørsted have been engaged in the pre-application process for the Morgan Generation Assets, including through the Section 42 consultation process and through the Marine Navigation Engagement Forum (MNEF) (see section 1.3.3 below and the Technical Engagement Plan, APP-094). The Applicant continues to engage with Ørsted through the Examination process including through responding to Relevant Representations and Interested Party submissions and engagement meetings as necessary. As noted in Volume 2, Chapter 9: Other sea users (APP-027) the Applicant is committed to continued communication with other offshore energy operators to promote and maximise cooperation between parties and

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

minimise both spatial and temporal interactions between conflicting activities. This will include continued engagement through the MNEF post-consent.

1.3.2 Alignment meetings

- 1.3.2.1 As noted in Volume 1, Chapter 1: Introduction and overarching glossary (APP-008), the Morgan Generation Assets has been scoped into the Pathways to 2030 workstream under the Offshore Transmission Network Review (OTNR). In July 2022, the UK Government published the 'Pathway to 2030 Holistic Network Design' documents, which set out the approach to connecting 50 GW of offshore wind to the National Grid. A key output of the HNDR process was the conclusion that the Morgan Generation Assets and the Morecambe Offshore Windfarm: Generation Assets should work collaboratively in connecting their two wind farms to the National Grid electricity transmission network at Penwortham in Lancashire. The Applicant is therefore delivering a coordinated grid connection with the Morecambe Offshore Windfarm: Generation Assets, including the sharing of offshore and onshore export cable corridors and grid connection location at Penwortham.
- 1.3.2.2 Due to the coordinated grid connection, the Applicant has held regular alignment meetings with Morecambe Offshore Windfarm Ltd and Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited throughout the pre-application phase, and this has continued into the Examination phase. The alignment meetings ensure exchange of key information including project timelines and alignment of approach, for example in relation to CEA across the projects.
- 1.3.2.3 In addition, the Applicant has held regular alignment meetings with Mona Offshore Wind Limited throughout the pre-application phase, and this has continued into the Examination phase. The alignment meetings have ensured alignment of approach in terms of assessment methodologies and mitigation, and ensure alignment on key issues raised during the Examination phase for each project.

1.3.3 Coordinated consultation

Non-statutory consultations

- 1.3.3.1 Non-statutory consultation was carried out simultaneously for the Morgan Generation Assets and Mona Offshore Wind Project to introduce the projects to stakeholders along the coast of northwest England and north Wales. Non-statutory consultation commenced in spring/summer 2021, with a written communication to stakeholders in July 2021. This early communication was positioned as a broad introduction, establishing the Applicants for the first time and opening a line of communication (Consultation Report (APP-088)). This was followed up with project updates to planning officers and lead members of local authorities across northwest England.
- 1.3.3.2 To ensure early engagement with communities, the Applicant carried out non-statutory consultation between 02 November and 13 December 2022 alongside the Morecambe Offshore Windfarm: Generation Assets and Morgan and Morecambe Offshore Wind Farms: Transmission Assets, where search areas for the offshore transmission infrastructure, the onshore cable routes and substations were presented for the projects (Consultation Report (APP-088)).

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Evidence Plan Process

- 1.3.3.3 Both the Morgan Generation Assets and Mona Offshore Wind Project have been discussed under one Evidence Plan; as such the Steering Group includes both English and Welsh stakeholders, which was beneficial in terms of assessing cumulative and in combination effects alongside alignment of assessment approaches and mitigation measures. The Steering Group has overseen the development and monitoring of the Evidence Plan and its subsequent progress. They first met at the start of the Evidence Plan Process (EPP) in November 2021 and have continued to meet on a regular basis throughout the project programme. Full details of the Steering Group remit and meeting details are set out in the Technical Engagement Plan (APP-094).
- 1.3.3.4 As part of the EPP, Expert Working Groups were established to discuss topic-specific issues with relevant stakeholders. EWG meetings have been held regularly throughout the process since February 2022 to provide the opportunity for stakeholders to give feedback and advice to inform the EIAs and HRA processes as well as site selection and project development and refinement. The process has been iterative, and each group has worked through the discussion points and to reach agreement, as far as possible, during the pre-application phases. Each project has separate agreement logs ensuring that any overlap or common issues (including cumulative/in-combination effects) between the two projects have been considered throughout the pre-application phase, while ensuring that any differences are properly and accurately recorded. Full details are set out in the Technical Engagement Plan (APP-094).

Technical consultation

- 1.3.3.5 Additional joint technical consultation was held alongside the Mona Offshore Wind Project due to overlapping stakeholders in the region (Technical Engagement Plan (APP-094)). This included the following topics:
- Commercial fisheries
 - Aviation and radar
 - Other sea users
 - Socio-economics.

Marine Navigation Engagement Forum (MNEF)

- 1.3.3.6 The Applicant facilitated a Marine Navigation Engagement Forum (MNEF) to enable the Applicant to regularly update stakeholders on plans and progress of the Morgan Generation Assets, Mona Offshore Wind Project, Morecambe Offshore Windfarm: Generation Assets and the Morgan and Morecambe Offshore Wind Farms: Transmission Assets, and for stakeholders to express views or concerns on the potential impacts of the projects for discussion and, where possible, resolution (Technical engagement plan (APP-094)).

Statutory consultations

- 1.3.3.7 The Morgan Generation Assets, the Mona Offshore Wind Project and the Morecambe Offshore Windfarm: Generation Assets projects chose to hold their statutory consultations concurrently and collaboratively from 19 April to 04 June 2023.
- 1.3.3.8 Despite this joint consultation, the three offshore wind farms remain separate projects, which are each the subject of their own Development Consent Order

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

(DCO) applications. Consideration was therefore given on how to minimise potential confusion among stakeholders and communities. As a result, the decision was made to carry out specific combined activities and create specific combined materials, where appropriate.

- 1.3.3.9 For example, Morgan Generation Assets and Morecambe Offshore Windfarm: Generation Assets combined certain promotional materials and activities for publicising their consultations on the Isle of Man. Specifically, the projects decided to create postcards promoting the consultation and joint consultation events, a single poster that was distributed to display locations and also to share online, print and Google advertising space.
- 1.3.3.10 In addition, joint exhibitions were also held to help increase participation in the two consultations. This approach enabled visitors to the joint events to find out about, and provide feedback in relation to, either project, or both projects, during a single visit.
- 1.3.3.11 Each project published its own Statement of Community Consultation (SoCC), consultation brochure, feedback forms and exhibition displays. A summary of consultation methods, locations, joint exhibitions and projects represented is provided within the Consultation Report Appendices (Part 1 (A1 to B1) APP-102)).

1.3.4 Coordinated assessments

Environmental Impact Assessment

- 1.3.4.1 The Environmental Statements for the Morgan Generation Assets, Mona Offshore Wind Project and the Morgan and Morecambe Offshore Wind Farms: Transmission Assets were carried out by the same team of competent experts. The team responsible for the production of the Environmental Statement has been led by the respective applicants, supported by lead EIA consultants RPS. The Environmental Statement has been prepared by a number of RPS in-house and subcontracted topic specialists, as set out in Volume 1, Chapter 1: Introduction and overarching glossary (APP-008) and the Statement Of Expertise (AS-009). This has ensured a coordinated approach to each topic of the EIA across the projects, including alignment on approach to baseline data, assessment methodologies, impact assessment, cumulative impact assessment, and mitigation.

Habitats Regulations Assessment

- 1.3.4.2 The Information to support an appropriate assessment (ISAA) for the Morgan Generation Assets, Mona Offshore Wind Project and the Morgan and Morecambe Offshore Wind Farms: Transmission Assets were carried out by the same team of competent experts. The team responsible for the production of the Habitats Regulations Assessment (HRA) has been led by the respective Applicants and lead HRA consultants RPS. Each of the three projects had an individual HRA lead, with the approach overseen by a separate strategic HRA lead who had oversight of the three projects. This has ensured a coordinated approach for the HRA across the projects.
- 1.3.4.3 Furthermore, the Evidence Plan Process that was held jointly for the Morgan Generation Assets and Mona Offshore Wind Project has fed into the HRA

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

process for these two projects, ensuring that common issues and in-combination matters are appropriately addressed within the respective HRAs.

Cumulative Regional Navigational Risk Assessment

- 1.3.4.4 A Cumulative Regional Navigational Risk Assessment (CRNRA) was produced in collaboration between the developers of the Morgan Generation Assets, the Mona Offshore Wind Project, the Morecambe Offshore Windfarm: Generation Assets and the Morgan and Morecambe Offshore Wind Farms: Transmission Assets. The objective of the CRNRA was to enable stakeholders to engage with and understand the potential cumulative effects of the four proposed projects. A regional (collaborative) approach to assessment was adopted to enable individual projects to quantify and manage the cumulative impacts in a coordinated, consistent and efficient manner. This assessment dovetails with the individual NRAs undertaken for each of the four offshore wind farm projects.
- 1.3.4.5 The Navigational Risk Assessment for the Morgan Generation Assets submitted with the application is available in APP-060 which includes a copy of the CRNRA within Appendix E. A specific Appendix considering the potential cumulative impact with the Mooir Vannin Offshore Wind Farm was included at Appendix D of Appendix E. At Deadline 6, the Applicant has submitted the Morgan – Mooir Vannin gap – navigational safety review technical clarification note (S_D6_42) in response to a refinement of the Mooir Vannin Offshore Wind Farm which has increased the separation distance from the Morgan Array Area to 4.1 nm. The Morgan – Mooir Vannin gap – navigational safety review technical clarification note (S_D6_42) sets out the Applicant's review of the increased separation distance, informed by additional navigation simulations with stakeholders and a hazard review workshop. The Applicant has concluded that there are no unacceptable risks to navigational safety associated with the Morgan Generation Assets, including cumulative effects with the refined Mooir Vannin Offshore Wind Farm, and all risks have been reduced to As Low As Reasonably Practicable (ALARP). This position aligns with the interim outputs of the Mooir Vannin assessment, and has also been agreed with the MCA, as both parties communicated at Issue Specific Hearing 3 of 12th February.

Offshore Ornithology CEA and In-combination Gap-filling of Historical Projects

- 1.3.4.6 Morgan Offshore Wind Limited, Mona Offshore Wind Limited and Morecambe Offshore Windfarm Ltd were provided with advice from Natural England as endorsed by NRW and JNCC regarding suggested methodologies for 'gap filling' historical offshore wind projects. It was requested that indicative estimates for currently 'unknown' displacement and collision impacts be generated for inclusion in the CEAs and in-combination assessments in order to further facilitate the Statutory Nature Conservation Bodies' (SNCBs) understanding of the total quantitative cumulative and in-combination impact for offshore ornithology.
- 1.3.4.7 Morgan Offshore Wind Limited, Mona Offshore Wind Limited and Morecambe Offshore Windfarm Ltd collaborated on the development of the methodology for this exercise. The methodology set out in the 'Offshore Ornithology Cumulative Effects Assessment and In-combination Gap-filling of Historical Projects Results' note submitted to the EWG on 15 August 2024 was developed collectively by Morgan Offshore Wind Limited and Mona Offshore Wind Limited to ensure

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

alignment in approach (note that this was not a joint submission with Morecambe Offshore Windfarm Ltd, primarily due to different project timescales). The methodology used to generate indicative numbers for currently unquantified impacts from historical projects accord with that recommended by the SNCBs.

- 1.3.4.8 The technical note quantifying the impacts from historical offshore wind projects for the Mona Offshore Wind Project was submitted into the Mona Offshore Wind Project Examination at Deadline 3 on 30 September 2024, with the technical note for the Morgan Generation Assets following on 03 October 2024 at Deadline 1 (REP1-010).

1.4 Any provisions in the Development Consent Order required for the Morgan Generation Assets to be implemented satisfactorily in relation to other projects

1.4.1 General

- 1.4.1.1 The draft DCO for the Morgan Generation Assets does not include any specific provisions that link it to other projects within the Irish Sea. The Applicant considers that to do so could cause an impediment to delivery of each project. There might be opportunities for co-operation between various projects in their construction and their mitigation measures, and it is in the interest of the Applicant to explore such co-ordination for efficiency reasons, but ultimately the timescales for delivery of the different projects could vary. For example, one project may be successful in a Contract for Difference auction and another not. Having legal obligations within the DCO for co-ordination of the projects would then impede delivery of the project that had been successful in the auction.

- 1.4.1.2 Whilst there are no specific provisions within the draft DCO that links the projects within the Irish Sea to one another, there are mitigation measures proposed by the Applicant as part of the Morgan Generation Assets that will ensure that it is implemented satisfactorily in relation to other projects.

- 1.4.1.3 For example, the purpose of the Outline Underwater Sound Management Strategy (S_D6_30) is to reduce the magnitude of impacts from elevated underwater sound from the Morgan Generation Assets. The Environmental Statement concluded that for the impact of piling there was no significant impact identified for the project alone, but the final UWSMS will also act as a means to reduce the Morgan Generation Assets' contribution to the cumulative increase in underwater sound within the region.

1.4.2 Morgan Generation Assets and Morgan and Morecambe Offshore Wind Farms: Transmission Assets

- 1.4.2.1 The scope of the applications and draft DCOs for the Morgan Generation Assets and the Morgan and Morecambe Offshore Wind Farms: Transmission Assets do not contain any shared infrastructure. There is therefore no 'overlap' in the infrastructure that would be authorised by each consent that needs to be regulated as between the two DCOs. The Applicant notes that this is a change from the position within the PEIR and statutory consultation for the Morgan and Morecambe Offshore Wind Farms: Transmission Assets, where the offshore substation platforms (OSPs) and interconnector cables were presented in the PEIR materials for both projects. The OSPs and interconnector cables are now

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

solely provided for in the Morgan Generation Assets application, as set out in draft DCO Schedules 3 and 4, Works No. 2 and 3 (S_D6_10).

1.5 Key survey data shared with other projects

- 1.5.1.1 This section summarises the key survey data shared between the Morgan Generation Assets and other projects, where applicable, as follows:
- Table 1.4: Morgan Generation Assets and Mona Offshore Wind Project
 - Table 1.5: Morgan Generation Assets and Morgan and Morecambe Offshore Wind Farms: Transmission Assets
 - Table 1.6: Morgan and Morecambe Offshore Wind Farms: Transmission Assets and Morecambe Offshore Windfarms: Generation Assets.
- 1.5.1.2 The Applicant notes that the Morgan Generation Assets and each of the projects relevant to this report are separate projects subject to their own independent EIA, HRA and application process. Each application is expected to adhere to the guidance issued by the relevant statutory authorities in terms of site-specific surveys required to inform the assessment. As such, survey data will necessarily be site-specific, due to the need to carry out surveys within a defined area and over a defined time period in order to meet guidance.
- 1.5.1.3 The survey data collected for each of the Round 4 projects is summarised in Appendix A; based on detail presented within in the respective applications or pre-application material. This demonstrates that each project has been informed by a similar level of site-specific survey data.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table 1.4: Survey data shared between the Morgan Generation Assets and Mona Offshore Wind Project.

Title	Extent of survey	Overview of survey	Survey contractor	Date	Reference
Metocean survey	Morgan and Mona Array Area	Metocean and floating lidar deployments to ascertain wind, wave and tidal currents	Fugro	2022	Morgan Generation Assets, Volume 2, Chapter 1 Physical processes (APP-013). Mona Offshore Wind Ltd. (2024) Volume 2, Chapter 1: Physical Processes.
Environmental Baseline Surveys and Habitat Assessments	Morgan and Mona Array Areas and Mona Offshore Cable Corridor and Access Areas	Deployment included multi-beam echo sounder (MBES), digital sound velocity (DSV) sensor, side scan sonar system (SSS), Sub-Bottom Profiler (SBP) & 2D Ultra High Resolution Seismic (2D UHRS) sensor. Additionally, seabed imagery was collected along with grab samples and Particle Size Analysis (PSA) undertaken	Gardline Ltd	2022	Morgan Generation Assets, Volume 2, Chapter 1 Physical processes (APP-013). Mona Offshore Wind Ltd. (2024) Volume 2, Chapter 1: Physical Processes.

Table 1.5: Survey data shared between the Morgan Generation Assets and Morgan and Morecambe Offshore Wind Farms: Transmission Assets.

Title	Extent of survey	Overview of survey	Survey contractor	Date	Reference
Environmental Baseline Surveys and Habitat Assessments	Morgan Offshore Wind Project: Generation Assets	Geophysical, geotechnical and environmental survey to determine characteristics of seabed sediment, characterise benthic communities (infauna and epifauna) and identification of any environmentally significant habitats (e.g. potential Habitats Directive Annex I and priority marine features). The geophysical survey elements consisted of multibeam echo sounder (MBES), digital sound velocity (DSV) sensor, side scan sonar system	Gardline Ltd	2021	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 1: Physical Processes.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Title	Extent of survey	Overview of survey	Survey contractor	Date	Reference
		(SSS), Sub-Bottom Profiler (SBP) & 2D Ultra High Resolution Seismic (2D UHRs) sensor. The environmental survey elements included the collection of seabed imagery along with grab samples. The geotechnical survey elements included cone penetration testing (CPT) and boreholes.			
Geophysical survey	Morgan Offshore Wind Project: Generation Assets	Geophysical survey to establish bathymetry, seabed sediment and identify seabed features.	XOCEAN Ltd	2022	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 1: Physical Processes.
Metocean survey	Morgan Offshore Wind Project: Generation Assets	Metocean and floating lidar deployments to ascertain wind, wave and tidal currents.	Fugro	2022	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 1: Physical Processes.
Benthic Subtidal Survey	Transmission Assets Red Line Boundary and Morgan Offshore Wind Project: Generation Assets and associated ZOI	Grab samples, Visual survey outputs (Drop Down Video (DDV) sampling) and laboratory testing	Gardline Ltd	April to July 2022	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 3: Fish and Shellfish Ecology
Aerial Digital Surveys - Morgan	Morgan Array Area plus 10 to 13.3 km buffer	Digital aerial surveys to characterise the distribution and abundance of seabirds within the Morgan Generation Assets offshore ornithology study area and identification of marine mammals.	APEM Ltd	April 2021 – March 2023	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 4: Marine Mammals. Morgan Offshore Wind Limited and Morecambe Offshore Windfarm

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Title	Extent of survey	Overview of survey	Survey contractor	Date	Reference
					Limited (2023) PEIR, Volume 2, Chapter 5: Offshore Ornithology.
Winter and summer Vessel Traffic Surveys	Morgan Offshore Wind Project: Generation Assets study area, plus a 10 nm buffer.	A summary of Fishing vessels identified during two project specific vessel traffic surveys (winter and summer).	NASH Maritime	21 November to 04 December 2021 15 July to 29 July 2022.	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 6: Commercial Fisheries Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 7 Shipping and Navigation
OFLO observations 2022	Morgan Offshore Wind Project: Generation Assets study area plus 10 nm buffer.	OFLO onboard the survey vessel recorded observations (from AIS, radar, visual observations and radio communications) of fishing vessels and fishing gear present.	NFFO	01 April 2022 to 10 July 2022	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 6: Commercial Fisheries
Vessel Traffic Survey	Morgan Offshore Wind Project: Generation Assets study area, plus a 10 nm buffer.	A summary of fishing vessels identified during a summer vessel traffic survey	NASH Maritime	04 to 18 May 2023	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 6: Commercial Fisheries

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table 1.6: Survey data shared between the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and Morecambe Offshore Windfarms: Generation Assets.

Title	Extent of survey	Overview of survey	Survey contractor	Date	Reference
Geophysical survey	Morecambe Offshore Windfarm: Generation Assets	Geophysical survey to establish bathymetry, seabed sediment and identify seabed features.	MMT	2021	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 1: Physical Processes. Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Chapter 7 - Marine Geology, Oceanography and Physical Processes.
Grab sample survey	Morecambe Offshore Windfarm: Generation Assets	Grab sampling to determine sediment type and particle size.	Ocean Ecology Ltd	2022	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 1: Physical Processes. Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Chapter 7 - Marine Geology, Oceanography and Physical Processes.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Title	Extent of survey	Overview of survey	Survey contractor	Date	Reference
Benthic characterisation survey	Morecambe Offshore Windfarm: Generation Assets	Particle Size Analysis (PSA), macrofaunal sampling, Drop Down Video (DDV), contaminant sampling	Ocean Ecology Ltd	2022	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 2: Benthic subtidal and intertidal ecology. Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Chapter 9 - Benthic Ecology.
Aerial surveys	Morecambe Offshore Windfarm: Generation Assets plus 4-10 km buffer	High resolution aerial digital still imagery for marine megafauna	HiDef Aerial Surveying Limited	Surveys were conducted over 24 months between March 2021 and February 2023.	Morecambe Offshore Windfarm Ltd. (2024) ES - Volume 5 - Chapter 11 - Marine Mammals. Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 4: Marine Mammals.
Aerial surveys	Morecambe Offshore Windfarm: Generation Assets plus 4-10 km buffer	High resolution aerial video imagery.	HiDef Aerial Surveying Limited	Surveys were conducted over 24 months between March 2021 and February 2023	Morecambe Offshore Windfarm Ltd. (2024) ES - Volume 5 - Chapter 12 - Offshore Ornithology. Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 5: Offshore Ornithology.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Title	Extent of survey	Overview of survey	Survey contractor	Date	Reference
Vessel Traffic Surveys	Morecambe Offshore Windfarm: Generation Assets, plus a 10 nm buffer.	A summary of fishing vessels identified during vessel traffic surveys (winter and summer).	NASH Maritime	09 to 26 February 2022 and 30 July to 13 August 2022 (a 14-day period each).	Morecambe Offshore Windfarm Ltd. (2024) ES - Volume 5 - Chapter 13 - Commercial Fisheries. Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 6: Commercial Fisheries.
Vessel Traffic Surveys	Morecambe Offshore Windfarm: Generation Assets, plus a 10 nm buffer.	Vessel traffic surveys undertaken in line with MGN 654 requirements.	NASH Maritime	09 to 26 February 2022 and 30 July to 13 August 2022 (a 14-day period each).	Morecambe Offshore Windfarm Ltd. (2024) ES - Volume 5 - Chapter 14 - Shipping and Navigation. Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 7: Shipping and Navigation.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

1.6 Mitigation measures shared with other projects, and how they are to be secured

- 1.6.1.1 Whilst it is expected that broadly similar mitigation measures will be in place for the Morgan Generation Assets and the other projects relevant to this report, as is standard for offshore wind developments, there is no specific mitigation that is shared with the other projects and secured across the consents. Mitigation measures will be secured and delivered for each separate project under their respective consents.
- 1.6.1.2 For example, each of the consents management plans committed to by the respective applicants will be secured in the respective project consents. For the Morgan Generation Assets and the Mona Offshore Wind Project, it is likely that the consents management plans would be prepared at a similar time and that the content would be coordinated between the projects, however the mitigation will be secured and delivered independently.
- 1.6.1.3 Similarly, the CRNRA describes industry standard risk controls that would be present for all four projects to individually manage their impacts on navigation. Where applicable, these risk controls will be secured within the respective individual projects' DCOs (see section 3.2 of Appendix E within APP-060).

1.7 Summary of cumulative impacts of the Morgan Generation Assets with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the Morecambe Offshore Windfarm: Generation Assets and approach to avoidance of stranded assets

1.7.1 Summary of cumulative impacts

- 1.7.1.1 This section provides a summary of the approach to CEA presented in the Morgan Generation Assets Environmental Statement specifically for the Morgan Generation Assets and the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the Morecambe Offshore Windfarm: Generation Assets.
- 1.7.1.2 The Morgan Generation Assets CEA takes into account the impact associated with the Morgan Generation Assets together with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets, the Morecambe Offshore Windfarm: Generation Assets, as well as other projects and plans. The projects and plans selected as relevant to the CEA are based upon the results of a screening exercise (see Volume 3, Annex 5.1: Cumulative effects screening matrix (APP-031)).
- 1.7.1.3 The cumulative assessment considered three scenarios:
- Scenario 1: Morgan Generation Assets plus Morgan and Morecambe Offshore Wind Farms: Transmission Assets
 - Scenario 2: Morgan Generation Assets plus Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the Morecambe Offshore Windfarm: Generation Assets
 - Scenario 3: Morgan Generation Assets plus Morgan and Morecambe Offshore Wind Farms: Transmission Assets alongside all other projects,

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

plans and activities. This assessment was allocated into ‘tiers’ reflecting the current stage of the other projects, plans and activities within the planning and development process. This tiered approach was adopted to provide a clear assessment of the Morgan Generation Assets and Morgan and Morecambe Offshore Wind Farms: Transmission Assets alongside other projects, plans and activities.

- 1.7.1.4 Table 1.7 provides a summary of the conclusions of the cumulative assessments for Scenario 1 (Morgan Generation Assets plus Morgan and Morecambe Offshore Wind Farms: Transmission Assets) as presented within the Morgan Generation Assets Environmental Statement. No significant residual adverse effects are predicted to arise, with the exception of impact to adverse weather routing for Isle of Man Steam Packet Company (IoMSPC) and Stena Line (see Table 7.42 of Volume 2, Chapter 7: Shipping and navigation (APP-025)).
- 1.7.1.5 Table 1.8 provides a summary of the conclusions of the cumulative assessments for Scenario 2 (Morgan Generation Assets plus Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the Morecambe Offshore Windfarm: Generation Assets) as presented within the Morgan Generation Assets Environmental Statement.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table 1.7: Summary of cumulative assessments for Scenario 1 as presented within the Morgan Generation Assets application.

Description of effect	Phase	Residual significance	Reference
Physical processes			
Increase in suspended sediments due to construction, operations and maintenance and/or decommissioning related activities, and the potential impact to physical features.	Construction, operation and decommissioning.	Negligible	Table 1.23 of Volume 2, Chapter 1: Physical processes (APP-013).
Impacts to the tidal regime due to presence of infrastructure.		Negligible	
Impacts to the wave regime due to presence of infrastructure.		Negligible	
Impacts to sediment transport and sediment transport pathways due to presence of infrastructure and associated potential impacts to physical features and bathymetry.		Negligible	
Benthic subtidal ecology			
Temporary habitat loss/disturbance	Construction, operation and decommissioning	Minor adverse	Table 2.28 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).
Increased SSC and associated deposition		Negligible or minor adverse (Important Ecological Feature (IEF) specific)	Table 2.29 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).
Long term habitat loss / habitat alteration		Minor adverse	Table 2.30 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).
Introduction of artificial structures		Minor adverse	Table 2.31 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).
Increased risk of introduction and spread of INNS.		Minor adverse	Table 2.32 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).
Removal of hard substrates.	Decommissioning	Minor adverse	Table 2.33 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Description of effect	Phase	Residual significance	Reference
Changes in physical processes.	Construction, operation and decommissioning	Negligible	Table 2.34 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).
Fish and shellfish ecology			
Temporary habitat loss/disturbance	Construction and decommissioning	Marine: Minor adverse	Table 3.42 of Volume 2, Chapter 3: Fish and shellfish ecology (APP-021).
		Diadromous: Negligible	
Underwater sound impacting fish and shellfish receptors	Construction	Minor adverse	
Increased suspended sediment concentrations (SSCs) and associated sediment deposition	Construction and decommissioning	Marine: Minor adverse	
		Diadromous: Negligible	
	Operation	Marine: Negligible or minor adverse	
		Diadromous: Negligible	
Long term habitat loss	Construction and decommissioning	Marine: Negligible to minor adverse	
		Diadromous: Minor adverse	
	Operation	Marine: Negligible to minor adverse	
		Diadromous: Negligible to minor adverse	
Electromagnetic Fields (EMF) from subsea electrical cabling	Operation	Minor adverse	
Introduction and colonisation of hard structures	Construction, operation and decommissioning	Minor adverse	
Injury due to increased risk of collision with vessels	Construction, operation and decommissioning	Minor adverse	
Marine mammals			
Injury and disturbance from elevated underwater sound during piling	Construction	Minor adverse	Table 4.53 of Volume 2, Chapter 4: Marine mammals (AS-010).

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Description of effect	Phase	Residual significance	Reference
Injury and disturbance from elevated underwater sound during UXO clearance	Construction	The CEA concludes a significant effect in EIA terms, for harbour porpoise only. The Applicant has committed to the development of an Underwater sound management strategy, to reduce the magnitude of impacts, such that there will be no residual significant effect for the project alone and therefore no contribution to cumulative effects.	Table 4.54 and paragraph A1.1.2.16 of Volume 2, Chapter 4 Marine mammals (AS-010).
Injury and disturbance from elevated underwater sound generated from site investigation survey sources	Pre-construction	Minor adverse	Table 4.55 of Volume 2, Chapter 4: Marine mammals (AS-010).
Injury and disturbance from elevated underwater sound due to vessel use and other (non-piling) sound producing activities	Construction and operation	Minor adverse	Table 4.56 of Volume 2, Chapter 4: Marine mammals (AS-010).
Increased likelihood of injury due to collision with vessels	Construction and operation	Minor adverse	Table 4.57 of Volume 2, Chapter 4: Marine mammals (AS-010).
Changes in fish and shellfish communities affecting prey availability	Construction, operation and decommissioning	Minor adverse	Table 4.58 of Volume 2, Chapter 4: Marine mammals (AS-010).
Offshore ornithology			
Disturbance and displacement from airborne noise, underwater sound, and presence of vessels and infrastructure	Construction, operation and decommissioning	Negligible adverse	Table 5.173 of Volume 2, Chapter 5: Offshore ornithology (APP-023) and the Applicant's Errata Sheet (REP3-011).
Collision Risk	Operation	Impact pathway is not applicable to the Morgan and Morecambe Offshore Wind Farms: Transmission Assets	
Combined collision risk and disturbance and displacement from airborne noise, underwater sound, and presence of vessels and infrastructure	Operation	Impact pathway is not applicable to the Morgan and Morecambe Offshore Wind Farms: Transmission Assets	
Commercial fisheries			
Loss or restricted access to fishing grounds		Minor	

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Description of effect	Phase	Residual significance	Reference
Interference with fishing activity	Construction, operation and decommissioning	Minor	Table 6.39 of Volume 2, Chapter 6: Commercial fisheries (APP-024).
Loss or damage to fishing gear due to Loss or damage to fishing gear due to snagging		Minor	
Potential impacts on commercially important fish and shellfish resources		Minor	

Shipping and navigation

Impact on recognised sea lanes essential to international navigation.	Construction, operation and decommissioning	Negligible	Table 7.42 of Volume 2, Chapter 7: Shipping and navigation (APP-025)
Impact to commercial operators including strategic routes and lifeline ferries.		Minor	
Impact to adverse weather routeing.		IoMSPC and Stena Line: Moderate Seatruck (CLDN) and Cargo/Tanker: Minor	
Impact on access to ports and harbours.		Negligible	
Impact on emergency response capability due to increased incident rates and reduced access for SAR responders.		Minor	
Impact on vessel to vessel collision risk.		Minor	
Impact on allision (contact) risk to vessels.		Minor	
Impact on marine navigation, communications and position fixing equipment.		Minor	
Impact on recreational craft passages and safety.		Minor	
Impact on snagging risk to vessel anchors and fishing gear.		Minor	

Marine archaeology and cultural heritage

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Description of effect	Phase	Residual significance	Reference
Sediment disturbance and deposition leading to indirect impacts on marine archaeology receptors	Construction, operation and decommissioning	Minor adverse	Table 8.27 of Volume 2, Chapter 8: Marine archaeology and cultural heritage (APP-026)
Direct damage to marine archaeology receptors (e.g. wrecks, debris, submerged prehistoric receptors (palaeolandscapes and associated archaeological receptors))		Minor adverse	
Alteration of sediment transport regimes	Operation	Minor adverse	

Other sea users

Displacement of recreational activities	Construction, operation and decommissioning	Minor adverse	Table 9.22 of Volume 2, Chapter 9: Other sea users (APP-027)
Reduction or restriction of other offshore energy activities		Minor adverse	Table 9.22 of Volume 2, Chapter 9: Other sea users (APP-027)
Interference with the performance of REWS located on oil and gas platforms	Operation	There is no potential for a cumulative effect on REWS arising from Scenario 1.	Table 9.19 of Volume 2, Chapter 9: Other sea users (APP-027)
Effect of rerouted traffic on REWS alarm rates		There is no potential for a cumulative effect on REWS alarm rates arising from Scenario 1.	Table 9.20 of Volume 2, Chapter 9: Other sea users (APP-027)

Seascape, landscape and visual resources

The effects of the Morgan Generation Assets and the Morgan and Morecambe Offshore Wind Farms: Transmission Assets as a whole on seascape, landscape and visual amenity are the same as that reported in section 10.8 of APP-014 along with the assessment updates documented in Annex 4.4 of the Applicant's response to EXQ1: SLVIA Clarification Note (REP3_010).

Aviation and radar

Creation of a physical obstacle to aircraft operations – Military and low flying operations	Construction, Operation and decommissioning	Minor adverse	Table 11.21 and Table 11.19 of Volume 2, Chapter 11: Aviation and radar (APP-015).
Wind turbines causing interference on aviation PSR systems		There is no potential for a cumulative effect on aviation PSR systems arising from Scenario 1.	

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Description of effect	Phase	Residual significance	Reference
Climate change			
Whole life GHG emissions	Construction, operation and decommissioning	Beneficial (significant)	Table 12.20 of Volume 2, Chapter 12: Climate change (APP-016).
Socio-economics			
The potential impact on economic receptors including employment and GVA.	Construction and decommissioning	North West England: Minor (beneficial) North Wales: Minor (beneficial) UK: Minor (beneficial)	Table 13.95, Table 13.96, Table 13.97 and Table 13.98 of Volume 2, Chapter 13: Socio-economics (APP-017).
	Operation	North West England: Minor (beneficial) North Wales: Moderate (beneficial)	
The potential impact of increased employment opportunities.	Construction and decommissioning	North West England: Negligible North Wales: Negligible	
	Operation	North West England: Minor (beneficial) North Wales: Minor (beneficial)	
The potential impact on population, housing and accommodation.	Construction and decommissioning	North West England: Negligible North Wales: Negligible	
	Operation	North West England: Minor (neutral) North Wales: Minor (neutral)	
The potential impact on tourism	Construction, operation and decommissioning	North West England: Negligible North Wales: Negligible Isle of Man: Negligible	
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services	Construction, operation and decommissioning	Isle of Man: Minor adverse	
Human health			
Transport modes, access and connectivity		Minor adverse	

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Description of effect	Phase	Residual significance	Reference
Community identity, culture, resilience and influence	Construction, operation and decommissioning	Minor adverse and minor beneficial	Table 14.25 of Volume 2, Chapter 14: Human health assessment (APP-018)
Employment and income		Minor adverse and minor beneficial	
Climate change and adaptation		Minor beneficial	
Wider societal infrastructure and resources		Moderate beneficial	

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table 1.8: Summary of cumulative assessments for Scenario 2 as presented within the Morgan Generation Assets application.

Description of effect	Phase	Residual significance	Reference
Physical processes			
Increase in suspended sediments due to construction, operations and maintenance and/or decommissioning related activities, and the potential impact to physical features.	Construction, operation and decommissioning.	Negligible	Table 1.23 of Volume 2, Chapter 1: Physical processes (APP-013).
Impacts to the tidal regime due to presence of infrastructure.		Negligible	
Impacts to the wave regime due to presence of infrastructure.		Negligible	
Impacts to sediment transport and sediment transport pathways due to presence of infrastructure and associated potential impacts to physical features and bathymetry.		Negligible	
Benthic subtidal ecology			
Temporary habitat loss/disturbance	Construction, operation and decommissioning	Minor adverse	Table 2.28 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).
Increase in SSC and associated deposition		Negligible or minor adverse (Important Ecological Feature (IEF) specific)	Table 2.29 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).
Long term habitat loss/habitat alteration		Minor adverse	Table 2.30 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).
Introduction of artificial structures		Minor adverse	Table 2.31 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).
Increased risk of introduction and spread of INNS.		Minor adverse	Table 2.32 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).
Removal of hard substrates	Decommissioning	Minor adverse	Table 2.33 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Description of effect	Phase	Residual significance	Reference
Changes in physical processes.	Construction, operation and decommissioning	Negligible	Table 2.34 of Volume 2, Chapter 2: Benthic Subtidal Ecology (APP-020).
Fish and shellfish ecology			
Temporary habitat loss/disturbance	Construction and decommissioning	Marine: Minor adverse	Table 3.42 of Volume 2, Chapter 3: Fish and shellfish ecology (APP-021).
		Diadromous: Negligible	
Underwater sound impacting fish and shellfish receptors	Construction	Minor adverse	
Increased suspended sediment concentrations (SSCs) and associated sediment deposition	Construction and decommissioning	Marine: Minor adverse	
		Diadromous: Negligible	
	Operation	Marine: Negligible or minor adverse	
		Diadromous: Negligible	
Long term habitat loss	Construction and decommissioning	Marine: Negligible to minor adverse	
		Diadromous: Minor adverse	
	Operation	Marine: Negligible to minor adverse	
		Diadromous: Negligible to minor adverse	
Electromagnetic Fields (EMF) from subsea electrical cabling	Operation	Minor adverse	
Introduction and colonisation of hard structures	Construction, operation and decommissioning	Minor adverse	
Injury due to increased risk of collision with vessels	Construction, operation and decommissioning	Minor adverse	
Marine mammals			
Injury and disturbance from elevated underwater sound during piling	Construction	Minor adverse	Table 4.53 of Volume 2, Chapter 4: Marine mammals (AS-010).

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Description of effect	Phase	Residual significance	Reference
Injury and disturbance from elevated underwater sound during UXO clearance	Construction	The CEA concludes a significant effect in EIA terms, for harbour porpoise only. The Applicant has committed to the development of an Underwater sound management strategy, to reduce the magnitude of impacts, such that there will be no residual significant effect for the project alone and therefore no contribution to cumulative effects.	Table 4.54 and paragraph A1.1.2.66 of Volume 2, Chapter 4 Marine mammals (AS-010).
Injury and disturbance from elevated underwater sound generated from site investigation survey sources	Pre-construction	The impact of injury and disturbance from underwater sound generated from pre-construction survey sources was not presented in the Morecambe Offshore Windfarm: Generation Assets PEIR marine mammal chapter. As such, a cumulative assessment was not presented in the Morgan Generation Assets EIA. Following submission of the Morecambe Offshore Windfarm: Generation Assets application, an assessment was presented in Review of Cumulative Effects Assessment and In-Combination Assessment (REP2-023) and concluded that the cumulative injury and disturbance effect from pre-construction site investigation surveys remains of minor adverse significance.	Table 4.55 and paragraph 4.11.3.4 of Volume 2, Chapter 4: Marine mammals (AS-010) and Review of Cumulative Effects Assessment and In-Combination Assessment (REP2-023).
Injury and disturbance from elevated underwater sound due to vessel use and other (non-piling) sound producing activities	Construction and operation	Minor adverse	Table 4.56 of Volume 2, Chapter 4: Marine mammals (AS-010).
Increased likelihood of injury due to collision with vessels	Construction and operation	Minor adverse	Table 4.57 of Volume 2, Chapter 4: Marine mammals (AS-010).
Changes in fish and shellfish communities affecting prey availability	Construction, operation and decommissioning	Minor adverse	Table 4.58 of Volume 2, Chapter 4: Marine mammals (AS-010).

Offshore ornithology

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Description of effect	Phase	Residual significance	Reference
Disturbance and displacement from airborne noise, underwater sound, and presence of vessels and infrastructure	Construction, operation and decommissioning	Negligible adverse	Table 5.173 of Volume 2, Chapter 5: Offshore ornithology (APP-023) and the Applicant's Errata Sheet (REP3-011).
Collision Risk	Operation	Negligible to minor adverse	
Combined collision risk and disturbance and displacement from airborne noise, underwater sound, and presence of vessels and infrastructure	Operation	Minor adverse	
Commercial fisheries			
Loss or restricted access to fishing grounds	Construction, operation and decommissioning	Minor	Table 6.39 of Volume 2, Chapter 6: Commercial fisheries (APP-024).
Interference with fishing activity		Minor	
Loss or damage to fishing gear due to snagging		Minor	
Potential impacts on commercially important fish and shellfish resources		Minor	
Shipping and navigation			
Impact on recognised sea lanes essential to international navigation	Construction, operation and decommissioning	Negligible	Table 7.42 of Volume 2, Chapter 7: Shipping and navigation (APP-025).
Impact to commercial operators including strategic routes and lifeline ferries		Minor	
Impact to adverse weather routeing		IoMSPC and Stena Line: Moderate Seatruck (CLDN) and Cargo/Tanker: Minor	
Impact on access to ports and harbours		Negligible	
Impact on emergency response capability due to increased incident rates and reduced access for SAR responders		Minor	
Impact on vessel to vessel collision risk		Minor	
Impact on allision (contact) risk to vessels		Minor	

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Description of effect	Phase	Residual significance	Reference
Impact on marine navigation, communications and position fixing equipment		Minor	
Impact on recreational craft passages and safety		Minor	
Impact on snagging risk to vessel anchors and fishing gear		Minor	
Marine archaeology and cultural heritage			
Sediment disturbance and deposition leading to indirect impacts on marine archaeology receptors	Construction, operation and decommissioning	Minor adverse	Table 8.27 of Volume 2, Chapter 8: Marine archaeology and cultural heritage (APP-026).
Direct damage to marine archaeology receptors (e.g. wrecks, debris, submerged prehistoric receptors (palaeolandscapes and associated archaeological receptors))		Minor adverse	
Sediment disturbance and deposition leading to indirect impacts on marine archaeology receptors		Minor adverse	
Potential for visual change within the setting of an asset		Negligible adverse	Table 8.25 of Volume 2, Chapter 8: Marine archaeology and cultural heritage (APP-026).
Other sea users			
Displacement of recreational activities	Construction, operation and decommissioning	Minor adverse	Table 9.22 of Volume 2, Chapter 9: Other sea users (APP-027).
Reduction or restriction of other offshore energy activities		Minor adverse	
Interference with the performance of REWS located on oil and gas platforms	Operation	Minor adverse	
Effect of rerouted traffic on REWS alarm rates		Minor adverse	

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Description of effect	Phase	Residual significance	Reference
Seascape, landscape and visual resources			
Effects on seascape, landscape and visual receptors	Construction and decommissioning	Due to the short term and largely reversible nature of the construction and decommissioning activities, significant cumulative effects on seascape, landscape and visual receptors are not expected to arise.	Section 10.9.3 within Volume 2, Chapter 10: Seascape, landscape and visual resources (APP-014) and Annex 4.4 to the Applicant’s response to EXQ1: SLVIA Clarification note (REP3-010).
	Operation	MCA 38: Moderate to major adverse (significant) due to the addition of the Morgan Generation Assets alongside the Morecambe Offshore Windfarm: Generation Assets.	
Aviation and radar			
Creation of a physical obstacle to aircraft operations – Military and low flying operations	Construction, operation and decommissioning	Minor adverse	Table 11.21 of Volume 2, Chapter 11: Aviation and radar (APP-015).
Wind turbines causing interference on aviation PSR systems	Operation	Minor adverse	
Climate change			
Whole life GHG emissions	Construction, operation and decommissioning	Beneficial (significant)	Table 12.20 of Volume 2, Chapter 12: Climate change (APP-016).
Socio-economics			
The potential impact on economic receptors including employment and GVA	Construction	North West England: Moderate (beneficial) North Wales: Moderate (beneficial) UK: Minor (beneficial)	Table 13.95, Table 13.96, Table 13.97 and Table 13.98 of Volume 2, Chapter 13: Socio-economics (APP-017).
	Operation	North West England: Minor (beneficial) North Wales: Moderate (beneficial)	
	Decommissioning	North West England: Minor (beneficial) North Wales: Moderate (beneficial) UK: Minor (beneficial)	

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Description of effect	Phase	Residual significance	Reference
The potential impact of increased employment opportunities	Construction and decommissioning	North West England: Negligible North Wales: Minor (beneficial)	
	Operation	North West England: Minor (beneficial) North Wales: Minor (beneficial)	
The potential impact on population, housing and accommodation	Construction and decommissioning	North West England: Negligible North Wales: Minor (beneficial)	
	Operation	North West England: Minor (neutral) North Wales: Minor (neutral)	
The potential impact on tourism	Construction, operation and decommissioning	North West England: Minor adverse North Wales: Minor adverse Isle of Man: Minor adverse	
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services	Construction, operation and decommissioning	Isle of Man: Minor adverse	
Human health			
Transport modes, access and connectivity	Construction, operation and decommissioning	Minor adverse	Table 14.25 of Volume 2, Chapter 14: Human health assessment (APP-018).
Community identity, culture, resilience and influence		Minor adverse and minor beneficial	
Employment and income		Minor adverse and minor beneficial	
Climate change and adaptation	Operation	Minor beneficial	
Wider societal infrastructure and resources	Operation	Moderate beneficial	

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

1.8 Approach to avoidance of stranded assets

- 1.8.1.1 The Applicant has submitted a standalone DCO application to consent the construction, operations and maintenance, and decommissioning of the generation assets of the Morgan Offshore Wind Project and a separate application to consent the construction, operations and maintenance and decommissioning of the transmission assets required to enable the export of electricity from both the Morgan Generation Assets and the Morecambe Offshore Windfarm: Generation Assets to the National Grid entry point at Penwortham.
- 1.8.1.2 National Policy Statements (NPS) EN-1, EN-3 and EN-5 recognise this approach, with it stated in Section 4.10 of EN-1 that: *“To support the achievement of the transition to net zero, government is accelerating the co-ordination of the development of the grid network to facilitate the UK’s net zero energy generation development and transmission.”*, within Section 3.8.50 of EN-3 that: *“As part of the transition to more co-ordinated transmission, it is anticipated that some proposals for transmission could be consented separately to those for the windfarm (array) application.”* and within Section 2.12 of EN-5 that: *“As part of the transition to a more coordinated approach, it is anticipated that some proposals for transmission may be consented separately to those for the windfarm (array) application.”*
- 1.8.1.3 As set out in the Applicant’s response to Natural England’s Relevant Representation (PD1-015), the Applicant is not going to construct the offshore wind farm array without certainty that it will be able to export electricity to the UK grid. It is the Applicant’s position that Natural England’s suggestion that the project could be constructed and become a stranded asset is unrealistic.

1.9 Summary of information relied on for the cumulative effects assessment and any changes since submission, including a summary of any changes

- 1.9.1.1 This section summarises the information relied on for the Morgan Generation Assets CEA and in-combination assessment in relation to the other projects relevant to this report in Table 1.9, including reference to relevant documents and what level of detail was available at the time of writing the assessment. The level of detail is defined as follows for the purposes of this report:
- High: full application available with detailed Environmental Statement
 - Medium: detailed draft Environmental Statement available
 - Low: Scoping report or initial (pre-EIA) consultation materials available.
- 1.9.1.2 Table 1.10, Table 1.11 and Table 1.12 set out any changes to this information since application submission (focusing on the projects relevant to this report only), including a reference to this information. Additional tables have been added, as relevant, at each applicable Examination Deadline.
- 1.9.1.3 The Applicant has undertaken a review of the CEA and in-combination assessments presented in the Morgan Generation Assets application to consider the updated information available in the Morecambe Offshore Windfarm: Generation Assets application (REP2-023 and REP3-019) and the Morgan and Morecambe Offshore Wind Farms: Transmission Assets application (REP4-024). At Deadline 6, a further review has been carried out to consider the

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

updated information available for the Mooir Vannin Offshore Wind Farm (as set out in Ørsted, 2025) and the East Irish Sea Transmission Project (as set out in REP5-070 to REP5-074). This review is presented in S_D6_29.

- 1.9.1.4 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 Morgan Generation Assets CEA and in-combination assessments therefore remain unchanged, except for shipping and navigation, where following the increased separation between the Morgan Array Area and Mooir Vannin Offshore Array Area, the cumulative impact on vessel to vessel collision risk and allision risk with Tier 1 and Tier 2 projects is now concluded to be minor.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table 1.9: Information relied on for the Morgan Generation Assets CEA at the time of the application (April 2024).

Project	Information CEA based on at Application		Level of detail
	Status	Reference	
Awel y Mor	Consented	RWE Renewables UK (2022) Awel y Môr Offshore Wind Farm, Environmental Statement, April 2022. Available: https://infrastructure.planninginspectorate.gov.uk/projects/wales/awel-y-mor-offshore-wind-farm/?ipcsection=docs&stage=app&filter1=Environmental+Statement . Accessed January 2024.	High
Mona Offshore Wind Project	Application	Mona Offshore Wind Ltd. (2024) Mona Offshore Wind Ltd. Environmental Statement. Available: https://infrastructure.planninginspectorate.gov.uk/projects/wales/mona-offshore-wind-farm/?ipcsection=docs . Accessed March 2024	High
Morecambe Offshore Windfarm: Generation Assets	PEIR	Morecambe Offshore Windfarm Ltd. (2023) Morecambe Offshore Windfarm Generation Assets Preliminary Environmental Information Report. Available: https://morecambeandmorgan.com/morecambe/en/consultationhub/#peir . Accessed November 2023.	Medium
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	PEIR	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) Morgan and Morecambe Offshore Wind Farms: Transmission Assets, Preliminary Environmental Information Report, October 2023. Available: https://morecambeandmorgan.com/transmission/our-consultation/consultationhub/ . Accessed January 2024.	Medium
Moor Vannin Generation Project	Scoping Report	Moor Vannin Offshore Wind Farm Limited (2023) Moor Vannin Offshore Wind Farm, Scoping Report, 2023. Available: https://orsted.im/moorvannin/document-library . Accessed January 2024.	Low

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table 1.10: Updated information available in the public domain at Deadline 1.

Project	Updated information available in the public domain at Deadline 1		Level of detail	CEA review required?
	Status update	Reference		
Awel y Mor	None	N/A	N/A	No
Mona Offshore Wind Project	None	N/A	N/A	No
Morecambe Offshore Windfarm: Generation Assets	Application submitted 31 May 2024	Morecambe Offshore Windfarm Ltd (2024) Morecambe Offshore Windfarm: Generation Assets Environmental Statement, Available: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010121/EN010121-000408-Morecambe%20Offshore%20Wind%20Farm%20-%20Examination%20Library.pdf . Accessed September 2024.	High	Yes
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	None	N/A	N/A	No
Moor Vannin Generation Project	Consultation materials published on 15 July 2024	Moor Vannin Offshore Wind Farm Limited (2024) Consultation materials, Available: https://orsted.im/moorvannin/document-library . Accessed September 2024.	Low	No – Level of detail available remains Low.

Table 1.11: Updated information available in the public domain at Deadline 4.

Project	Updated information available in the public domain at Deadline 4		Level of detail	CEA review required?
	Status update	Reference		
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Application submitted and accepted into Examination	Morgan and Morecambe Offshore Wind Farms: Transmission Assets Environmental Statement. Available: https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN020032/documents . Accessed November 2024.	High	Yes

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table 1.12: Updated information available in the public domain at Deadline 6.

Project	Updated information available in the public domain at Deadline 6		Level of detail	CEA review required?
	Status update	Reference		
Moor Vannin Generation Project	Consultation materials published, including a number of project refinements.	Ørsted (2025) Moor Vannin Offshore Wind Farm Community Consultation Summary Report January 2025.	Low	Yes – Project refinements, including reduction in site boundary, have implications for the Tier 2 Morgan Generation Assets CEA.
East Irish Sea Transmission Project	Section 35 Direction and associated supporting information, and location plans, have been made publicly available.	Moor Vannin Offshore Wind Limited REP5-070 to REP5-074.	Low	Yes – Limited information available in the public domain. A proportionate review has been carried out on a conceptual basis for this Tier 3 project.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

1.10 Summary of progress of coordination with the other projects

- 1.10.1.1 Appendix G of the Rule 6 letter requires that a summary of progress of coordination with the other projects is set out, including the matters that have been agreed, any inconsistencies or outstanding matters, and next steps.
- 1.10.1.2 The approach to coordination between the Morgan Generation Assets and the other relevant projects is set out in section 1.3 of this report, and evidenced throughout this report where appropriate. The Applicant is delivering a coordinated grid connection with the Morecambe Offshore Windfarm: Generation Assets, in line with NPS EN-1, EN-3 and EN-5, with coordination carried out with other relevant projects as far as reasonably practicable and appropriate given the varying project timelines. A coordinated approach to stakeholder consultation was undertaken with key projects at the outset and continued throughout the pre-application phase. Where appropriate, key survey data has been shared between the relevant projects to strengthen the individual environmental baselines, and where site-specific surveys have been carried out, these have followed standard practice and ensure that the evidence base upon which to carry out the assessments is similar.
- 1.10.1.3 Where relevant and as detailed in this report, the EIA and HRA assessment approaches have been coordinated, and delivered by the same team of competent experts to ensure consistency. This has ensured a coordinated approach to each topic of the EIA across the relevant projects, including alignment on approach to baseline data, assessment methodologies, impact assessment, cumulative impact assessment, and mitigation.
- 1.10.1.4 To address the change in status of the Morecambe Offshore Windfarm: Generation Assets and Morgan and Morecambe Offshore Wind Farms: Transmission Assets since the submission of the Morgan Generation Assets application, and the further information available in relation to the Mooir Vannin Offshore Wind Farm, the Applicant has carried out a review of the CEA and in-combination assessment at Deadline 2, Deadline 4 and Deadline 6 to establish whether the conclusions remain current and robust. As described in section 1.9, 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 Morgan Generation Assets CEA and in-combination assessments therefore remain unchanged, except for shipping and navigation, where following the increased separation between the Morgan Array Area and Mooir Vannin Offshore Array Area, the cumulative impact on vessel to vessel collision risk and allision risk with Tier 1 and Tier 2 projects is now concluded to be minor.
- 1.10.1.5 Consequently, the Applicant is satisfied that the coordination carried out is sufficient to ensure a robust evidence base upon which to establish and determine each application, with the regular reviews of available project information during the Examination phase ensuring this position has been maintained. The Applicant believes that the coordination evidenced goes beyond what is typically undertaken for similar offshore wind projects.
- 1.10.1.6 The Applicant notes that the Morgan Generation Assets and each of the projects relevant to this report are separate projects subject to an independent consenting process and will be delivered independently. No further coordination beyond that set out in section 1.3 of this report is proposed or considered to be appropriate.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

1.11 References

Moor Vannin Offshore Wind Farm Limited (2023) Moor Vannin Offshore Wind Farm, Scoping Report, 2023. Available: <https://orsted.im/moorvannin/document-library>. Accessed January 2024.

Mona Offshore Wind Ltd. (2024) Mona Offshore Wind Ltd. Environmental Statement. Available: <https://infrastructure.planninginspectorate.gov.uk/projects/wales/mona-offshore-wind-farm/?ipcsection=docs>. Accessed March 2024

Morecambe Offshore Windfarm Ltd. (2023) Morecambe Offshore Windfarm Generation Assets Preliminary Environmental Information Report. Available: <https://morecambeandmorgan.com/morecambe/en/consultationhub/#peir>. Accessed November 2023.

Morecambe Offshore Windfarm Ltd (2024) Morecambe Offshore Windfarm: Generation Assets Environmental Statement, Available: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010121/EN010121-000408-Morecambe%20Offshore%20Wind%20Farm%20-%20Examination%20Library.pdf>. Accessed September 2024.

Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) Morgan and Morecambe Offshore Wind Farms: Transmission Assets, Preliminary Environmental Information Report, October 2023. Available: <https://morecambeandmorgan.com/transmission/our-consultation/consultationhub/>. Accessed January 2024.

Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2024) Morgan and Morecambe Offshore Wind Farms: Transmission Assets, Environmental Statement. Available: <https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN020032/documents>. Accessed November 2024.

National Grid (2024) TEC Register. Available: https://www.nationalgrideso.com/data-portal/transmission-entry-capacity-tec-register/tec_register. Accessed: September 2024

Ørsted (2024) Moor Vannin Website. Available: <https://orsted.im/moorvannin>. Accessed: September 2024.

Ørsted (2025) Moor Vannin Offshore Wind Farm Community Consultation Summary Report January 2025. Available at: https://cdn.orsted.com/-/media/www/docs/corp/uk/im/post-consultation/moorvannin_community-consultation-summary-report_20250124.pdf?rev=1e42096841204c4aad173319f1877163&hash=C1C029AD871C037376183D6C0BE84A78. Accessed: January 2025.

Appendix A: Survey Data Collected

Table A.1 to Table A.9

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table A.1: Site-specific survey data collected for the Morgan Generation Assets and other relevant projects (Physical processes).

Project	Environmental Baseline Surveys and Habitat Assessments/ Grab Sample Survey	Geophysical survey	Metoccean survey	Reference
Morgan Generation Assets	✓	✓	✓	Morgan Generation Assets, Volume 2, Chapter 1: Physical processes (APP-013).
Mona Offshore Wind Project	✓	✓	✓	Mona Offshore Wind Ltd. (2024) Volume 2, Chapter 1: Physical Processes.
Morecambe Offshore Windfarm: Generation Assets	✓	✓		Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Chapter 7 - Marine Geology, Oceanography and Physical Processes.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	✓	✓	✓	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 1: Physical Processes.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table A.2: Site-specific survey data collected for the Morgan Generation Assets and other relevant projects (Benthic ecology).

Project	Geophysical survey	Benthic subtidal survey: Grab sample survey	Benthic subtidal survey: Drop down video	Benthic intertidal survey	Reference
Morgan Generation Assets	✓	✓	✓	N/A	Morgan Generation Assets, Volume 2, Chapter 2: Benthic subtidal ecology (APP-020)
Mona Offshore Wind Project	✓	✓	✓	✓	Mona Offshore Wind Ltd. (2024) Volume 2, Chapter 2: Benthic subtidal and intertidal ecology.
Morecambe Offshore Windfarm: Generation Assets	✓	✓	✓	N/A	Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Chapter 9 - Benthic Ecology.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	✓	✓	✓	✓	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 2: Benthic subtidal and intertidal ecology.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table A.3: Site-specific survey data collected for the Morgan Generation Assets and other relevant projects (Fish and shellfish ecology).

Project	Benthic Subtidal Survey (as per Table A.2)	Reference
Morgan Generation Assets	✓	Morgan Generation Assets, Volume 2, Chapter 3: Fish and shellfish ecology (APP-021)
Mona Offshore Wind Project	✓	Mona Offshore Wind Ltd. (2024) Volume 2, Chapter 3: Fish and shellfish ecology.
Morecambe Offshore Windfarm: Generation Assets		Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Chapter 10 - Fish and Shellfish Ecology.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	✓	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 3: Fish and Shellfish Ecology.

Table A.4: Site-specific survey data collected for the Morgan Generation Assets and other relevant projects (Marine mammals).

Project	Aerial Digital Surveys	Reference
Morgan Generation Assets	✓	Morgan Generation Assets, Volume 2, Chapter 4: Marine mammals (AS-010).
Mona Offshore Wind Project	✓	Mona Offshore Wind Ltd. (2024) Volume 2, Chapter 4: Marine Mammals.
Morecambe Offshore Windfarm: Generation Assets	✓	Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Chapter 11 - Marine Mammals.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	✓* * data from Morgan Generation Assets and Morecambe Offshore Windfarm: Generation Assets	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 4: Marine Mammals.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table A.5: Site-specific survey data collected for the Morgan Generation Assets and other relevant projects (Offshore ornithology).

Project	Aerial Digital Surveys	Reference
Morgan Generation Assets	✓	Morgan Generation Assets, Volume 2, Chapter 5: Offshore ornithology (APP-023).
Mona Offshore Wind Project	✓	Mona Offshore Wind Ltd. (2024) Volume 2, Chapter 5: Offshore Ornithology.
Morecambe Offshore Windfarm: Generation Assets	✓	Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Chapter 12 - Offshore Ornithology.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	✓* * data from Morgan Generation Assets and Morecambe Offshore Windfarm: Generation Assets	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 5: Offshore Ornithology.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table A.6: Site-specific survey data collected for the Morgan Generation Assets and other relevant projects (Commercial fisheries).

Project	Offshore Fisheries Liaison Officer (OFLO) observations	Vessel traffic survey	Scouting survey (to record static gear)	Reference
Morgan Generation Assets	✓	✓	✓	Morgan Generation Assets, Volume 2, Chapter 6: Commercial fisheries (APP-024).
Mona Offshore Wind Project	✓	✓	✓	Mona Offshore Wind Ltd. (2024) Volume 2, Chapter 6: Commercial Fisheries.
Morecambe Offshore Windfarm: Generation Assets		✓	✓	Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Chapter 13 - Commercial Fisheries.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	✓	✓	✓	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 6: Commercial Fisheries.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table A.7: Site-specific survey data collected for the Morgan Generation Assets and other relevant projects (Shipping and navigation).

Project	Vessel Traffic Survey (Winter)	Vessel Traffic Survey (Summer)	Fishing season Vessel Traffic Survey	Navigation simulations	Reference
Morgan Generation Assets	✓	✓	✓	✓	Morgan Generation Assets, Volume 2, Chapter 7: Shipping and navigation (APP-025).
Mona Offshore Wind Project	✓	✓		✓	Mona Offshore Wind Ltd. (2024) Volume 2, Chapter 7: Shipping and navigation.
Morecambe Offshore Windfarm: Generation Assets	✓	✓		✓	Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Chapter 14 - Shipping and Navigation.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	✓* * data from Morgan Generation Assets and Morecambe Offshore Windfarm: Generation Assets	✓* * data from Morgan Generation Assets and Morecambe Offshore Windfarm: Generation Assets			Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 7: Shipping and Navigation.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table A.8: Site-specific survey data collected for the Morgan Generation Assets and other relevant projects (Seascape, landscape and visual resources).

Project	SLVIA Photography	Reference
Morgan Generation Assets	✓	Morgan Generation Assets, Volume 2, Chapter 10: Seascape, landscape and visual resources.
Mona Offshore Wind Project	✓	Mona Offshore Wind Ltd. (2024) Volume 2, Chapter 8: Seascape and visual resources.
Morecambe Offshore Windfarm: Generation Assets	✓	Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Chapter 18 - Seascape, Landscape and Visual Impact Assessment.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	✓	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 4, Chapter 1: Seascape, landscape and visual resources.

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Table A.9: Site-specific survey data collected for the Morgan Generation Assets and other relevant projects (Marine archaeology and cultural heritage).

Project	Sidescan Sonar (SSS)	Multibeam Bathymetry (MBES)	Sub-bottom profiler (SBP)	Magnetometry	Geotechnical /Boreholes	Vibrocores (cable corridor)	Setting assessment site visits	Reference
Morgan Generation Assets	✓	✓	✓		✓	N/A	✓	Morgan Generation Assets, Volume 2, Chapter 8: Marine archaeology and cultural heritage (APP-026).
Mona Offshore Wind Project	✓	✓	✓	✓	✓	✓	✓	Mona Offshore Wind Ltd. (2024) Volume 2, Chapter 8: Marine Archaeology. Mona Offshore Wind Ltd. (2024) Volume 7, Annex 5.6: Settings assessment (onshore infrastructure) and Volume 7, Annex 5.7: Settings assessment (offshore infrastructure).
Morecambe Offshore Windfarm: Generation Assets	✓	✓	✓	✓	✓		✓	Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Chapter 15 - Marine Archaeology and Cultural Heritage. Morecambe Offshore Windfarm Ltd. (2024) ES Volume 5 - Appendix 15.3 - Settings Assessment.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	✓	✓	✓	✓	✓* * data from Morgan Generation Assets	✓	✓	Morgan Offshore Wind Limited and Morecambe Offshore Windfarm Limited (2023) PEIR, Volume 2, Chapter 8: Marine Archaeology and Volume 3, Chapter 5: Historic environment.