Environmental Impact Assessment Report
Volume 4: Outline Vessel Management and Navigational Safety Plan

MarramWind Offshore Wind Farm

December 2025

MarramWind

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1. Introduction

1.1 Overview

1.1.1.1 This combined Outline Vessel Management Plan (VMP) and Navigational Safety Plan (NSP) (hereafter referred to as 'the VMNSP') has been produced along with the Environmental Impact Assessment (EIA) Report. The VMNSP intends to discharge the offshore consent conditions relevant to the VMP and NSP in the consent under Section 36 of the Electricity Act 1989 (hereafter referred to as s.36) and associated conditions in the marine licences, which require the submission of a VMP and NSP detailing vessel management and navigational safety associated with the MarramWind Offshore Wind Farm (hereafter referred to as 'the Project').

1.1.1.2 The VMNSP will be applicable to elements of the Project seaward of Mean High Water Springs (MHWS).

1.1.1.3 This Outline VMNSP relates to M-039 of **Volume 3, Appendix 5.2: Commitments Register**.

1.2 Project background

1.2.1.1 MarramWind Offshore Wind Farm (hereafter referred to as 'the Project') is wholly owned by Scottish Power Renewables UK Limited (SPR). MarramWind Limited, a subsidiary of SPR, is the Applicant for the Project.

1.2.1.2 The Project is a proposed floating wind farm located in the North Sea, with a grid connection capacity of up to 3 gigawatts (GW). The location of the Project is determined by the Option Area Agreement (OAA), which is the spatial boundary of the Northeast 7 (NE7) Plan Option within which the electricity generating infrastructure will be located. The NE7 Plan Option is located north-east of Rattray Head on the Aberdeenshire coast in north-east Scotland, approximately 75 kilometres (km) at its nearest point to shore and 110km at its furthest point. An Option to Lease Agreement (OLA) for the Project within the NE7 Plan Option was signed in April 2022.

1.1.1.1 A summary of the Project is provided in **Volume 1, Chapter 1: Introduction** and a comprehensive description of the Project is provided in **Volume 1, Chapter 4: Project Description** of the EIA Report.

1.1.1.2 The Project's offshore infrastructure, located seaward of MHWS, includes the following:

- wind turbine generators (WTGs), including WTG floating units (platforms and station keeping system);
- array cables;
- subsea distribution centres;
- subsea substations;
- offshore substations;
- reactive compensation platform(s) (if required); and
- offshore export cables to connect the offshore infrastructure to the landfall(s).

1.2.1.3 The layout to be utilised by the Project will be determined post consent in consultation with the Maritime and Coastguard Agency (MCA) and Northern Lighthouse Board (NLB). It is

noted that the final layout of surface piercing infrastructure will be contained entirely within the Option Agreement Area (OAA).

1.2.1.4 The EIA Report accompanies applications for offshore consents, licences and permissions for the Project to (MD-LOT under Section 36 (s.36) of the Electricity Act 1989, the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009, for the offshore infrastructure seaward of MHWS.

1.2.1.5 The EIA Report also accompanies an application to Aberdeenshire Council for planning permission in principle consent under The Town and Country Planning (Scotland) Act 1997, for the onshore infrastructure landward Mean Low Water Springs (MLWS).

1.2.1.6 There are four sets of EIA regulations applicable to the Project: the Electricity Works (EIA) (Scotland) Regulations 2017 for offshore generating stations requiring s.36 consent; the Marine Works (EIA) (Scotland) Regulations 2017 and the Marine Works (EIA) Regulations 2007 for marine licence applications within Scottish territorial waters (0 to 12 nautical miles) and offshore waters (12 to 200 nautical miles) respectively; and the Town and Country Planning (EIA) (Scotland) Regulations 2017 for planning applications submitted to Aberdeenshire Council for onshore infrastructure located landward of MLWS.

1.3 Purpose of the Vessel Management and Navigational Safety Plan

1.3.1.1 This Outline VMNSP has been produced to demonstrate how the project intends to satisfy the relevant consent conditions, including where in this document the specific requirements of the consent conditions are addressed at this stage. This document sets out the proposed approach to vessel management and navigational safety of the Project, in accordance with the relevant guidance, during construction and operation. Once constructed, the offshore transmission assets will be divested and responsibilities relating to these assets will be transferred to the Offshore Transmission Owner (OFTO). A detailed Final VMNSP will be developed and submitted for approval prior to the commencement of construction.

1.3.1.2 This Outline VMNSP has been produced to provide MD-LOT with the available information and proposed approach to vessel management and navigational safety during the construction and operation and maintenance (O&M) stages, in order to demonstrate how the project will mitigate the impact of project vessels and navigational risk to other legitimate users of the sea. A detailed Final VMNSP will be developed and submitted for approval prior to the commencement of construction. The decommissioning stage will require a separate marine licence and therefore consideration of vessel management and navigational safety for decommissioning will be undertaken at the time of decommissioning to support the marine licence application.

1.3.1.3 The information provided in this document is based on the current understanding of the baseline environment and how the Project will be constructed and operated using the best available technologies, in compliance with current legislation and best practice at the time of writing.

1.3.1.4 The VMNSP will be reviewed as required and updated if necessary. Information contained within this Outline VMNSP is accurate at the time of submission, but it is recognised that changes or updates may be required to reflect changes following consultation or changes in best practice. All parties involved, including Principal Contractors, Subcontractors and their suppliers, must comply with the relevant provisions of the detailed VMNSP. They are obligated to provide documentation outlining how they will guarantee both the implementation and monitoring of the VMNSP requirements.

1.4 Legislation and guidance

1.4.1.1 The VMNSP has been developed with reference to the following key legislation and guidance:

- Marine Guidance Note (MGN) 654 (Merchant and Fishing) Safety of Navigation: Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response (MCA, 2021a);
- International Organization for Marine Aids to Navigation (IALA) Recommendation O-139 on The Marking of Man-Made Offshore Structures (IALA, 2021a);
- IALA Guideline G1162 The Marking Offshore Man-Made Structures (IALA, 2021b);
- The Electricity (Offshore Generating Stations) (Safety Zones) (Application Procedures and Control of Access) Regulations 2007 (United Kingdom (UK) Government, 2007);
- Convention on International Regulations for Preventing Collisions at Sea (COLREGs) (International Maritime Organization (IMO), 1972/77); and
- International Convention for the Safety of Life at Sea (SOLAS) (IMO, 1974).

1.5 Implementation of the Final Vessel Management and Navigational Safety Plan

1.5.1.1 The Final VMNSP approved by Scottish Ministers will be incorporated into the contracts for Principal Contractors responsible for the works. All parties involved, including Principal Contractors, subcontractors and their suppliers, must comply with the relevant provisions of the detailed Final VMNSP. They are obligated to provide documentation outlining how they will guarantee both the implementation and monitoring of the Final VMNSP requirements.

1.5.1.2 It is acknowledged that this VMNSP, once approved, may require updating from time to time. This Section outlines the general procedure that will be followed. Factors that may influence the need for a review and / or update include:

- significant change to the design of the Project;
- significant change in methods or schedule outlined within this VMNSP;
- significant changes in knowledge of baseline information or environment of relevance to the contents of this VMNSP;
- significant changes in legislation or best practice guidance;
- significant stage in Project lifecycle (e.g. completion of construction, divestment of OFTO); and
- scheduled reviews.

1.6 Other related implementation plans

1.6.1.1 The VMNSP will be developed with consideration of the content and requirements of other relevant Implementation Plans. These are set out in **Table 1.1** below the details of the linkages.

Table 1.1 Other related implementation plan to the Final VMNSP

Implementation plan	Linkage with VMNSP
Lighting and Marking Plan (LMP)	Details how the Project will be lit and marked in accordance with key guidance and policies as well as stakeholder requirements. An **Outline LMP** is provided in this Volume.
Aids to Navigation (AtoN) Management Plan	Details how AtoN associated with the Project will be managed including maintenance, repair and emergency provisions.
Emergency Response Cooperation Plan (ERCoP)	Details relevant information relating to the Project and appropriate actions in the event of an emergency situation.
Environmental Management Plan	Details how environmental effects will be managed including in relation to marine mammals and bird species, which may include in association with Project vessel traffic. The **Outline Environmental Management Plan** has been submitted as part of this application.
Project Environmental Monitoring Programme	Details the proposed environmental monitoring throughout the lifespan of the Project.
Offshore Invasive Non-Native Species (INNS) Management Plan	The **Outline Offshore Invasive Non-Native Species Plan** provides management measures to prevent INNS, including with vessels.
Offshore Operation and Maintenance Plan	Sets out the programme for O&M of the Project including marine coordination during the O&M stage.

2. Navigational Safety Measures

2.1 Construction

2.1.1 Overview

2.1.1.1 The following subsections present the navigational safety measures that will be implemented by the Applicant during the construction stage of the Project.

2.1.2 Temporary lighting and marking

2.1.2.1 The LMP pertinent to the Project (**Outline Lighting and Marking Plan**) will set out the precise details of the lighting and marking to be implemented during the construction of the Project. This will be in line with requirements of the NLB, MCA, Civil Aviation Authority (CAA) and Ministry of Defence (MoD) and will adhere to IALA Recommendation R0139 (IALA, 2021a) and IALA Guideline G1162 (IALA, 2021b).

2.1.3 Guard vessels

2.1.3.1 Guard vessels may be required at particular times, for example when third-party vessels are particularly vulnerable due to partially completed works or a particular construction activity. During these periods, the construction area may be monitored by guard vessel(s) to further protect the area and to provide additional information to third-party vessels.

2.1.3.2 The decision(s) on when to use a guard vessel will be informed by a risk assessment of the activities.

2.1.3.3 A guard vessel may also be required to monitor safety zones noting this will be further assessed as part of the safety zone application (see **Section 2.1.4**).

2.1.4 Safety zones

2.1.4.1 Section 95 and Schedule 16 of the Energy Act 2004 set out the basic requirements for applying for a safety zone to be placed around or adjacent to an Offshore Renewable Energy Installation (OREI). The Electricity (Offshore Generating Substations) (Safety Zones) (Applications Procedures and Control of Access) Regulations 2007 clarify the requirements for applications which applies to territorial waters in or adjacent to Scotland and within the Renewable Energy Zone.

2.1.4.2 It is noted that as of 1 April 2017, the application process for safety zones within Scottish waters has been devolved from the Department of Business, Energy, and Industrial Strategy (BEIS) (now the Department for Energy, Security and Net Zero) to MD-LOT. An application will therefore be made to MD-LOT, accompanied by a layout plan, a summary of the construction programme and construction method statement documents, as well as the proposed methodology for notifying relevant stakeholders.

2.1.4.3 It is intended that the following safety zones will be applied for during construction in relation to all infrastructure within the OAA:

- rolling 500 metre (m) safety zones around structures during construction; and
- pre-commissioning 50m safety zones around structures either partially completed or constructed but not yet commissioned.

2.1.4.4 Further details pertaining to planned safety zones are provided in the **Safety Zone Statement**.

2.1.5 Management of buoyed construction area including safety zones

2.1.5.1 **Section 5** presents the methods by which project vessels will be managed within the buoyed construction area including safety zones.

2.1.6 Restricted in their ability to manoeuvre operations

2.1.6.1 Vessels that are restricted in their ability to manoeuvre (RAM) will be utilised during construction and installation activities and therefore have limited ability in avoiding an approaching vessel(s). All RAM vessels involved in the construction of the Project will comply with the COLREGs (IMO, 1972/77). All vessels, regardless of their nationality, are required to comply with this convention to ensure that they do not interact with vessels that are restricted in their navigational ability.

2.1.6.2 RAM vessels will display lights and shapes to indicate their restrictions. They will transmit safety warnings on Very High Frequency (VHF) radio to inform other vessels of their actions using the 'Securité' message if the messages contain important information relating to navigation. Communications between RAM vessels and the marine coordination centre will be ongoing throughout the operations.

2.1.6.3 RAM vessels will comply with vessel type regulation information transmitted through automatic identification system (AIS) and show current navigational status at all times to ensure other vessels equipped with AIS can identify that they are RAM.

2.1.6.4 RAM vessel activities will also be promulgated through the notification procedure, and, if necessary, following internal risk assessment, guard vessels may be employed during the activity period.

2.1.7 Emergency Response Cooperation Plan

2.1.7.1 As required under MGN 654 (MCA, 2021a), the Applicant will produce an ERCoP in liaison with the MCA.

2.1.7.2 The Applicant will also prepare an Emergency Response Plan (ERP), which will detail the emergency planning and response control measures to be implemented during the construction stage.

2.1.8 Damage, destruction or decay of the Project

2.1.8.1 The Applicant will notify the Scottish Ministers, in writing, in the case of damage to, destruction, or decay of the Project during the construction stage. The Scottish Ministers will advise of any remedial action to be taken and any AtoN to be displayed following consultation from the MCA, NLB, or any such required advisors.

2.2 Operation and maintenance

2.2.1.1 The following subsections set out the navigational safety measures to be implemented by the Applicant during the O&M stage of the Project.

2.2.2 Marine coordination

2.2.2.1 [Specific detail of any marine coordination function to be added post consent].

2.2.3 Lighting and marking

2.2.3.1 The LMP pertinent to the Project will set out the precise details of the lighting and marking of the Project during the O&M stage. Again, this will be in line with requirements of the NLB, MCA, CAA and MoD, and will adhere to IALA Recommendation R0139 (IALA, 2021a) and IALA Guideline G1162 (IALA, 2021b).

2.2.4 Safety zones

2.2.4.1 The Applicant is not intending to utilise operational safety zones during normal operations. During times of major maintenance works, a temporary 500m statutory safety zone may be applied for in relation to all structures within the OAA under the Electricity (Offshore Generating Stations) (Safety Zones) (Application Procedures and Control of Access) Regulations 2007. Minimum advisory safe passing distances, as defined by a risk assessment, may also be applied where safety zones do not apply (advisory safe passing distances).

2.2.4.2 Further details pertaining to planned safety zones are provided in the **Safety Zone Statement**.

2.2.5 Restricted in their ability to manoeuvre operations

2.2.5.1 RAM vessels may be used during maintenance operations. The same procedures will apply as per construction stage, outlined in **Section 2.1.6**.

2.2.6 Emergency response cooperation plan

2.2.6.1 The approved ERCoP for the construction stage (see **Section 2.1.7**) will be updated and amended for the O&M stage, noting that the MCA-required HUB template (MCA, 2021b) will be used.

2.2.6.2 The Applicant will also prepare a separate ERP which shall detail the required emergency planning and response control measures to be implemented across the construction and O&M stages of the Project by all the Applicant personnel and contractors.

2.2.7 Injury, decay, and destruction of the Project

2.2.7.1 The Applicant will notify the Scottish Ministers, in writing, in the case of injury to, destruction, or decay of the Project during the O&M stage. The Scottish Ministers will advise of any remedial action to be taken and any AtoN to be displayed following consultation from the MCA, NLB, or any such required advisors.

3. Promulgation of Information

3.1.1.1 This Section provides information of the proposed approach to distribution and issuing Notifications to Mariners (NtMs) and other appropriate notifications to the relevant stakeholders and other marine users.

3.2 Local Notifications to Mariners

3.2.1.1 Local Notifications to Mariners (LNtM) will be issued in advance of any activity associated with the Project which may impact upon navigational safety. The Applicant will issue LNtM to a list of relevant local and national stakeholders. The list will be regularly updated to ensure contact details remain up to date and all relevant parties are included.

3.2.1.2 The LNtM will be concise, detailing navigational safety information and may include, but not limited to, the information set out in **Table 3.1**. A standard template will be defined.

Table 3.1 Content of LNtM

Title	**Clearly state that the document is a LNtM and a short relevant title about the scope of the topic. This will include the date of issue and the notification number.**
Supplementary information	Details of the organisation and development issuing the LNtM and any relevant LNtM/s issued prior to the current one.
Details	• date / time of start / finish and location of the works (coordinates); • vessels onsite including call signs; • activity being undertaken; and • specific risk to navigation.
Contact details	Sufficient details to allow mariners to contact the organisation issuing the LNtM including the marine coordination centre / 24-hour emergency contact.
Guard vessel and safety zone details	Details of any guard vessels or safety zones present and enforced.
Hyperlinks to additional information	Provided only if absolutely necessary.

3.2.1.3 Among the organisations that the LNtM will be issued to is the UK Hydrographic Office (UKHO). Upon receipt of a LNtM, the UKHO will decide whether to include information in their Weekly Admiralty NtMs, as described in **Section 3.3**.

3.2.2 Local Notifications to Mariners issued prior to the commencement of construction

3.2.2.1 The Applicant will, as soon as practicable prior to the commencement of any construction activities, ensure that local mariners, fishermen's organisations, and His Majesty's Coastguard, in this case the Joint Rescue Coordination Centre and Aberdeen Maritime

Rescue Coordination Centre, are made fully aware of the Licensable Marine Activity through LNtM (or any other appropriate means).

3.2.3 Local Notifications to Mariners upon commissioning and during O&M

3.2.3.1 The Applicant will ensure that local mariners, fisherman's organisations, and the Maritime Rescue Coordination Centre (MRCC) are made fully aware of the completion of the construction works and commissioning of the Project.

3.2.3.2 The Applicant will ensure that relevant stakeholders are informed via LNtM of any planned and unplanned maintenance activities that are outside the day-to-day maintenance activities associated with the Project.

3.2.4 Post commissioning

3.2.4.1 The Applicant will, upon the commissioning of the Project, provide the 'as built' positions and maximum heights of all WTGs, offshore substations, reactive compensation platforms (RCPs) and any subsea infrastructure to the UKHO for aviation and nautical charting purposes.

3.3 Admiralty Notices to Mariners (United Kingdom Hydrographic Office)

3.3.1.1 Admiralty NtMs are issued to the UKHO and are based on the information provided within LNtM. The UKHO issues these on a weekly basis to provide physical corrections to charts and associated publications. It is the responsibility of mariners to look up the Weekly Editions of Admiralty NtMs, which can be found on the UKHO website and to make necessary corrections to the charts on board their vessel.

3.4 Hydrographic charts

3.4.1.1 The precise locations and maximum heights of all WTGs and construction equipment over 150m above Lowest Astronomical Tide, and the details of any fixed lighting fitted to all WTGs, will be provided to the UKHO for aviation and nautical charting.

3.4.1.2 WTGs will be charted by the UKHO using the WTG tower or project area chart symbol (as presented in Symbols and Abbreviations used on ADMIRALTY Paper Charts NP5011 (UKHO, 2020) on charts deemed appropriate in terms of scale.

3.5 Kingfisher Bulletins and Kingfisher Information Service – Offshore Renewables & Cable Awareness

3.5.1.1 The Kingfisher Information Service – Offshore Renewables and Cable Awareness (KIS-ORCA) project is a joint initiative between Subsea Cables UK and Renewable UK and is managed by the Kingfisher Information Service of Seafish. Information is available in fortnightly bulletins or downloadable from the KIS-ORCA website.

3.5.1.2 Notification to the Kingfisher fortnightly bulletin may include, for example, an overview of the Project, roles and responsibilities, method statements relevant to the scope of the work for which the notification is issued, offshore activity schedule, navigational safety

procedures, advisory safe passing distances, and any relevant drawings or other project information.

3.5.1.3 The following subsections detail the KIS-ORCA notifications that will be promulgated for each stage of the Project.

3.5.2 Notifications prior to the commencement of construction

3.5.2.1 The Applicant will ensure that details of the Project are promulgated in the Kingfisher fortnightly bulletins, as soon as reasonably practicable prior to the commencement of construction of the Project, to inform the fishing industry of vessels routes, timing and locations of construction works, and relevant details of the construction activities.

3.5.3 Notifications during construction

3.5.3.1 The Applicant, through the marine coordination centre, will ensure that the progress of construction of the Project is promulgated in the Kingfisher fortnightly bulletins to inform the fishing industry of the vessel routes, and timings and locations, and relevant details of the construction activities.

3.5.4 Notifications upon commissioning and during O&M

3.5.4.1 The Applicant will ensure that the commissioning of the Project is promulgated to the Kingfisher fortnightly bulletin to inform the commercial fishing industry.

3.5.4.2 The Applicant will ensure notices are issued to the Kingfisher fortnightly bulletin detailing any planned or unplanned maintenance activities that are outside the day-to-day maintenance carried out at the Project.

3.6 Radio navigational warnings

3.6.1.1 Radio navigational warnings may be issued if an activity or incident poses a danger to other marine users. Examples of when radio navigational warnings could be issued are:

- failures to light signals, fog signals, buoys, or other AtoN;
- establishing new AtoN;
- RAM vessel activities, where a risk is posed to passing traffic;
- other underwater operations that may constitute potential dangers in or near shipping lanes; and
- vessels not under command or undertaking significant RAM operations.

3.6.1.2 Once details of an activity have been issued through the standard NtMs process, the UKHO will then decide if the warning should be transmitted as a radio navigational warning. The UKHO will then issue the navigational warning.

3.6.1.3 In the context of radio navigational warnings, the UKHO act as the Navigation Area (NAVAREA) 1 (NE Atlantic) Coordinator of the IMO and International Hydrographic Organization Worldwide Navigational Warning Service and also as the UK coordinator for issuing coastal navigational warnings. The MCA however is the overarching body responsible for broadcasting the warnings and is the organisation responsible for charging levies to broadcast them.

3.6.1.4 The broadcasts are under the control of the UKHO but tend be made as follows:

- for vessels in NAVAREA 1, broadcasts are made through Enhanced Group Call Safety NET within 30 minutes of receiving the navigational warning, or at the next scheduled broadcast (every 12 hours);
- broadcast by Navigational Telex (Navtex) twice a day as UK Coastal Navigational Warnings by appropriate Navtex stations at each transmission time (every 4 hours), or upon receipt of the information if it is of a vital nature; and
- broadcast by VHF or Medium Frequency radio at selected MCA stations at the next scheduled broadcast and every 12 hours thereafter.

3.7 United Kingdom marine reporting requirements

3.7.1.1 In addition, within UK waters, all vessels are required to report all incidents relating to navigational safety by the quickest means possible to the Marine Accident Investigation Branch (MAIB). The MAIB has a dedicated reporting line for all purposes (+44 (0)23 8023 2527), which is staffed 24 hours per day.

3.7.1.2 Information required shall include:

- details of the incident;
- details of the vessel(s) involved; and
- details of personnel involved.

3.8 Other notifications

3.8.1.1 The Applicant will consult local harbour Masters, where appropriate, who may wish to issue local warnings to those navigating in the vicinity of the Project.

4. Location of Working Ports

4.1 Construction ports

4.1.1.1 [Details of each port and their involvement in the delivery / transport / storage of construction parts and their role throughout the construction stage will be added post consent – an indicative shortlist of construction ports is provided in **Volume 1, Chapter 4: Project Description**].

4.2 Operation and maintenance ports

4.2.1.1 [Details of the port expected to be used during O&M as an O&M base will be added post consent – an indicative shortlist of O&M ports is provided in **Volume 1, Chapter 4: Project Description**].

4.3 Other operation and maintenance ports

4.3.1.1 In addition to the ports that will be listed in **Section 4.1** and **Section 4.2**, other ports may be used during the construction and O&M stages, with these likely to be local to the Project. Information regarding any other ports used will, if necessary, be promulgated via methods outlined in **Section 3**.

4.3.1.2 [Details of any mentioned ports used in the facilitation of crew transfers and other small vessels throughout the Project lifetime will be added post consent].

5. Management and Coordination of Vessels

5.1.1.1 During the construction stage, the following measures of relevance to management and coordination of vessels will be in place:

- A Marine Coordinator (MC) based at the marine coordination centre will be responsible for managing construction activities.
- Permission for construction vessels to enter the construction area and safety zones will be managed by the MC, for example using a Permit to Work system.
- The MC will liaise with vessels with regards to agreed routeing destinations / berth / anchorage (where applicable).
- The MC will continually monitor vessels and personnel via communication with vessels and AIS for any potential vessel access conflicts. The MC will also detect and monitor unauthorised vessels.
- The MC will define safety zones, no-go locations etc.
- The MC will obtain and provide localised weather information for vessels working on the Project to plan the work being undertaken.
- The MC will be the central contact point for contractors in the case of an emergency and will maintain a copy of the ERCoP.
- The MC will issue NtMs from contractors after being reviewed and approved by the Applicant.

5.1.1.2 All marine operations and vessel movements will be planned with due regard to the requirements of the VMNSP.

5.1.1.3 During operation, similar provisions for vessel coordination will be established with marine coordination via the MC throughout the O&M stage. Further information on marine coordination during the O&M stage will be provided, for approval, in the Offshore Operation and Maintenance Plan.

6. Types and Specification of Vessel

6.1.1.1 This Section will outline the types and specifications of vessels to be utilised during the construction stage (**Section 6.3**) and O&M stage (**Section 6.4**). Depending on information available, the Final VMNSP may include indicative vessels and specifications where specific vessels are not yet known, and these may vary depending on market availability. Specifications which will be included include (but are not limited to) vessel type, dimensions, propulsion, and mooring/ station keeping.

6.2 Standards and requirements

6.2.1.1 Vessel crews must meet recognised standards and comply with the international maritime rules (as adopted by the relevant flag state) and regulations for their class and area of operation. The Applicant will conduct independent vessel audits on construction vessels as necessary to check that they meet these standards and are appropriate for the purpose of their desired role(s).

6.2.1.2 Vessel crews will be required to meet the requirements for the size, type, and area of operation in line with Standards for Training, Certification and Watchkeeping as set out by the IMO, and any site specific requirements implemented by the Applicant above the minimum standards outlined above in **Section 5**.

6.2.1.3 All vessels involved in the construction of the Project will display the required lights and day shapes in accordance with the requirements of COLREGs (IMO, 1972/77). All construction vessels as required will be equipped with AIS receivers and transmitters.

6.2.1.4 The Applicant will require all construction vessels to comply with the procedures set out in this document and any other relevant plan.

6.3 Construction stage

6.3.1.1 The construction works for which vessel specifications will be provided include:

- floating units, offshore substation and RCP jacket substructures, and topside installation;
- anchor and mooring installation;
- array cable installation;
- WTG installation;
- export cable installation; and
- construction support.

6.4 Operation and Maintenance stage

6.4.1.1 Similar vessels are likely to be required, at various times, to those described for construction in **Section 6.3**.

7. Numbers and Movements of Vessels

7.1 Construction vessels

7.1.1.1 The number of vessels operating in relation to the Project at any one time will vary during the construction stage, with peaks in vessel activity reflecting the timing of major installation works.

7.1.1.2 **Volume 1, Chapter 4: Project Description** presents indicative vessel numbers for the construction stage for the purposes of EIA. Those values are not definitive and may be subject to change.

7.1.1.3 For each vessel type anticipated to be at sea, **Table 7.1** will present the indicative number of vessels involved in construction, the main construction activities they will be involved in, and the anticipated number of return journeys (a transit to the Project site, and then back to port) they will make (if available). It should be noted that the number of transits will be a best estimate based on the available information at the time of writing, and the actual numbers may differ during the construction stage.

Table 7.1 Construction vessel activities summary

Vessel type	Anticipated total number	Key construction activities	Approximate number of return journeys
[Details to be added port consent]	[Details to be added port consent].	[Details to be added port consent].	[Details to be added port consent].

7.2 Operation and Maintenance vessels

7.2.1.1 The number of vessels operating in relation to the Project during the O&M stage at any one time will vary, with peaks in vessel activity reflecting the timing of major maintenance works. Consequently, it is not possible at this time to provide precise numbers of vessel movements during the O&M stage.

7.2.1.2 **Volume 1, Chapter 4: Project Description** presents indicative vessel numbers for the O&M stage for the purposes of EIA. Those values are not definitive and may be subject to change.

7.2.1.3 Estimates based on current information are provided in **Table 7.2**.

Table 7.2 Operational activities summary

Vessel type	Anticipated total number	Trips to port	Approximate number of return journeys
[Details to be added port consent]	[Details to be added port consent].	[Details to be added port consent].	[Details to be added port consent].

8. Indicative Transit Corridors

8.1.1.1 The indicative transit corridors for the major construction vessels between the Project and the relevant construction ports will be presented in **Figure 1**.

8.1.1.2 Note the indicative transit corridors presented in **Figure 1** will not be intended to be prescriptive and are unlikely to be followed precisely by every vessel. However, they are designed to give an indication to other users the areas within they may expect to encounter additional Project construction vessels.

8.1.1.3 All vessels shall passage plan as per SOLAS (IMO, 1974). In addition, vessels may take alternatives from these indicative transit corridors for a variety of reasons, at the discretion of the vessels' Master, including:

- compliance with COLREGs as required;
- prevailing weather, tidal, or sea state conditions;
- navigational hazards as indicated on charts, or notified through NtMs or such sources;
- vessels originating from or being bound to, a destination not indicated by the indicative transit routes;
- instructions from the marine coordination centre or other responsible persons in charge of coordinating and managing construction vessel traffic; and
- any other reason the Master of a vessel may deem relevant for the purpose of ensuring the safety of their vessel or another.

Figure 1 Indicative transit corridors

[Figure showing indicative transit corridors relative to Project to be added post consent].

9. Anchoring

9.1.1.1 No anchorage areas were identified as being located within proximity to the Project (see Section 7 within **Volume 3, Appendix 15.1: Navigational Risk Assessment**).

9.1.1.2 Nevertheless, anchoring is at the discretion of the vessel Master but can be in conjunction with the information provided by the marine coordination centre or port authorities, where relevant. However, standard marine practice requires that when a vessel proceeds to anchor, consideration is given to:

- water depth;
- seabed type and charted hazards including cables / pipelines;
- weather and tidal information including current and predicted weather;
- avoidance of prohibited anchorage areas;
- consideration of other anchored vessels;
- avoidance of known areas of other marine activity such as fishing or recreational boating; and
- avoidance of main commercial routes, pilot boarding area or other navigational features such as spoil grounds or subsea cables.

9.1.1.3 All vessels associated with the Project will take the above into consideration prior to anchoring as per standard marine practice. Construction and O&M vessels requiring anchorage within the Project will request permission to do so from the MC.

10. Environmental Sensitivities Relevant to Vessel Management

10.1.1.1 This Section will summarise the environmental sensitivities marine mammals and ornithology, as relevant to vessel traffic associated with construction and O&M of the Project (where applicable). This section shall also describe the indicative transit corridors as detailed in **Section 8** above in the context of the environmental sensitivities.

11. Compliance with Marine Guidance Note 654

11.1.1.1 The relevant consent condition requires the Project to demonstrate that the VMNSP has adequately addressed all of the recommendations of MGN 654 and its annexes (MCA, 2021a) that may be appropriate to the Project, or any other relevant document which may supersede said guidance prior to approval of the VMNSP.

11.1.1.2 MGN 654 (MCA, 2021a) has therefore been reviewed and all appropriate recommendations (at this pre-construction stage of the development) have been identified. In each case it has been indicated where each of these recommendations has been addressed within this VMNSP document (or other relevant consent plan) for the Project. The review summary will be provided in **Table 11.1** for the Final VMNSP post consent.

Table 11.1 MGN 654 compliance

MGN 654 section	Checklist	Where addressed
4.5 Site and Installation Co-ordinates	Developers are responsible for ensuring that formally agreed co-ordinates and subsequent variations of site perimeters and individual OREI structures are made available, on request, to interested parties at relevant project stages, including application for consent, development, array variation, operation, and decommissioning. This should be supplied as authoritative Geographical Information System data, preferably in Environmental Systems Research Institute format. Metadata should facilitate the identification of the data creator, its date and purpose, and the geodetic datum used. For mariners' use, appropriate data should also be provided with latitude and longitude coordinates in WGS84 (ETRS89) datum.	[Details to be added post consent].
4.10 Assessment of Access to and Navigation Within, or Close to, an OREI	It should be determined to what extent navigation would be feasible within or near to the OREI site itself by assessing whether: a. Navigation within and / or near the site would be safe: i. for all vessels, or ii. for specified vessel types, operations and / or sizes. iii. in all directions or areas, or iv. in specified directions or areas. v. in specified tidal, weather or other conditions. b. Navigation in and / or near the site should be prohibited or restricted: i. for specified vessels types, operations and / or sizes, ii. in respect of specific activities,	[Details to be added post consent].

MGN 654 section	Checklist	Where addressed
	iii. in all areas or directions, or iv. in specified areas or directions, or v. in specified tidal or weather conditions, or simply vi. recommended to be avoided c. Where it is not feasible for vessels to access or navigate through the site it could cause navigational, safety or routeing problems for vessels operating in the area for example, by preventing vessels from responding to calls for assistance from persons in distress d. Guidance on the calculation of safe distance of OREI boundaries from shipping routes has been considered.	
4.11 Search and rescue (SAR), maritime assistance service, counter pollution and salvage incident response	a. An ERCoP will be developed for the construction, operation and decommissioning stages of the OREI.	[Details to be added post consent].
	b. The MCA's guidance document OREI: Requirements, Advice and Guidance for SAR and Emergency Response for the design, equipment and operation requirements will be followed.	[Details to be added post consent].
	c. A SAR checklist will be completed to record discussions regarding the requirements, recommendations and considerations outlined in the above document (to be agreed with MCA).	[Details to be added post consent].
4.12 Hydrography	In order to establish a baseline, confirm the safe navigable depth, monitor seabed mobility and to identify underwater hazards, detailed and accurate hydrographic surveys are included or acknowledged for the following stages and to MCA specifications: i. Pre-construction: The proposed generating assets area and proposed cable route ii. On a pre-established periodicity during the life of the development iii. Post-construction: Cable route(s) Post-decommissioning of all or part of the development: the installed generating assets area and cable route.	[Details to be added post consent].
4.14 Risk mitigation measures recommended for OREI during construction, operation and decommissioning	Promulgation of information and warnings through notices to mariners and other appropriate maritime safety information dissemination methods.	[Details to be added post consent].
	Continuous watch by multi-channel VHF, including Digital Selective Calling.	[Details to be added post consent].

MGN 654 section	Checklist	Where addressed
	Safety zones of appropriate configuration, extent and application to specified vessels.	[Details to be added post consent].
	Provision of AtoN as determined by the NLB.	[Details to be added post consent].
	Monitoring by Radio Detection and Ranging (Radar), AIS, Closed Circuit Television (CCTV) or other agreed means.	[Details to be added post consent].
	Appropriate means for OREI operators to notify, and provide evidence of, the infringement of safety zones.	[Details to be added post consent].
	Creation of an ERCoP with the MCA's SAR Branch for the construction stage onwards.	[Details to be added post consent].
	Use of guard vessels, where appropriate.	[Details to be added post consent].

12. Compliance with the Application

12.1.1.1 In addition to the offshore consent conditions presented in **Section 1.4**, other consent conditions that have also been considered will be outlined in **Table 12.1**, including where they have been addressed in this VMNSP.

Table 12.1 Compliance with the Project EIA Report

Source	Mitigation	Where addressed
[To be added post consent]	[To be added post consent].	[To be added post consent].

13. References

Electricity Act 1989 (1989 c.29). [online] Available at: https://www.legislation.gov.uk/ukpga/1989/29/contents [Accessed: 2 September 2025].

International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), (2021a). *IALA Recommendation 0139 on The Marking of Man-Made Offshore Structures*: Edition 3.0. Saint Germain en Laye, France: IALA. [online] Available at: https://www.iala.int/product/r0139/ [Accessed: 2 September 2025]

International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), (2021b). *IALA Guideline G1162 The Marking of Offshore Man-Made Structures:* Edition 1.0. Saint Germain en Laye, France: IALA. [online] Available at https://www.iala.int/product/g1162/ [Accessed: 2 September 2025]

International Maritime Organization (IMO), (1972/77). *Convention on International Regulations for Preventing Collisions at Sea (COLREGs)*. [online] Available at: London: IMO. https://www.imo.org/en/about/conventions/pages/colreg.aspx [Accessed: 2 September 2025]

International Maritime Organization (IMO), (1974). *International Convention for the Safety of Life at Sea (SOLAS).* London: IMO. [online] Available at: https://www.imo.org/en/about/conventions/pages/international-convention-for-the-safety-of-life-at-sea-(solas),-1974.aspx [Accessed: 2 September 2025]

Marine (Scotland) Act 2010 (2010 asp. 5). [online] Available at: https://www.legislation.gov.uk/asp/2010/5/contents [Accessed: 2 September 2025].

Maritime and Coastguard Agency (MCA), (2021a). *Marine Guidance Note 654 (Merchant and Fishing) Safety of Navigation: Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response*. Southampton: MCA.[online] Available at: https://assets.publishing.service.gov.uk/media/64637cd60b72d3000c34454c/MGN_654.pdf [Accessed: 2 September 2025]

Maritime and Coastguard Agency (MCA), (2021b). *Emergency Response Cooperation Plans (ERCoP): Template for Construction, Operations and Decommissioning phases.* Southampton: MCA. [online] Available at: https://assets.publishing.service.gov.uk/media/61d815ccd3bf7f054fcc240a/hub_ERCoP_template_ v2.0.odt [Accessed: 2 September 2025]

Scottish Government, (2020). *Sectoral Marine Plan for Offshore Wind Energy*. Edinburgh: Scottish Government. [online] Available at: https://www.gov.scot/publications/sectoral-marine-plan-offshore-wind-energy/ [Accessed: 2 September 2025]

The Electricity (Offshore Generating Stations) (Safety Zones) (Application Procedures and Control of Access) Regulations 2007 (SI 2007 1948). [online] Available at: https://www.legislation.gov.uk/uksi/2007/1948/contents [Accessed: 2 September 2025].

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (SI 2017 101). [online] Available at: https://www.legislation.gov.uk/ssi/2017/101/contents [Accessed: 2 September 2025].

The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (SI 2017 115). [online] Available at: https://www.legislation.gov.uk/ssi/2017/115/contents [Accessed: 2 September 2025].

Town and Country Planning (Scotland) Act 1997 (1989 c.8). [online] Available at: https://www.legislation.gov.uk/ukpga/1997/8/contents [Accessed: 2 September 2025].

UK Government, (2007). The Electricity (Offshore Generating Stations) (Safety Zones) (Application Procedures and Control of Access) Regulations 2007. [online] https://www.legislation.gov.uk/uksi/2007/1948/introduction [Accessed 25 September 2025].

United Kingdom Hydrographic Office (UKHO), (2022) *Admiralty Sailing Directions North Coast of Scotland Pilot, NP52. 11th Edition*. Taunton: UKHO [Accessed: 2 September 2025].

United Kingdom Hydrographic Office (UKHO), (2020), NP5011 - Symbols and Abbreviations used in Admiralty Charts. Taunton: UKHO.

14. Glossary of Terms and Abbreviations

14.1 Abbreviations

Acronym	Definition
AIS	Automatic Identification System
AtoN	Aids to Navigation
BEIS	Department for Business, Energy, and Industrial Strategy
CAA	Civil Aviation Authority
COLREGs	Convention on International Regulations for Preventing Collisions at Sea
EIA	Environmental Impact Assessment
ERCoP	Emergency Response Cooperation Plan
ERP	Emergency Response Plan
IALA	International Organization for Marine Aids to Navigation
IMO	International Maritime Organization
KIS-ORCA	Kingfisher Information Service – Offshore Renewables and Cable Awareness
LMP	Lighting and Marking Plan
LNtM	Local Notifications to Mariners
m	Metre
MAIB	Marine Accident Investigation Branch
MC	Marine Coordinator
MCA	Maritime and Coastguard Agency
MD-LOT	Marine Directorate – Licensing Operations Team

Acronym	Definition
MF	Medium Frequency
MGN	Marine Guidance Note
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
MoD	Ministry of Defence
MRCC	Maritime Rescue Coordination Centre
NAVAREA	Navigation Area
Navtex	Navigational Telex
NLB	Northern Lighthouse Board
nm	nautical mile
NSP	Navigational Safety Plan
NtMs	Notifications to Mariners
O&M	Operation and Maintenance
OA	Option Agreement
OAA	Option Agreement Area
OFTO	Offshore Transmission Owner
OREI	Offshore Renewable Energy Installation
Radar	Radio Detection and Ranging
RAM	Restricted in Ability to Manoeuvre
RCP	Reactive Compensation Platform
s.36	Section 36 of the Electricity Act 1989

Acronym	Definition
SAR	Search and Rescue
SOLAS	Convention for the Safety of Life at Sea
SPR	ScottishPower Renewables
UK	United Kingdom
UKHO	United Kingdom Hydrographic Office
VHF	Very High Frequency
VMNSP	Vessel Management and Navigational Safety Plan
VMP	Vessel Management Plan
WTG	Wind Turbine Generator

14.2 Glossary of terms

Term	Definition
Automatic Identification System (AIS)	A system by which vessels automatically broadcast their identity, key statistics including location, destination, length, speed and current status. Most commercial vessels and European Union fishing vessels over 15 metre (m) in length are required to carry AIS.
Baseline	Existing conditions as represented by the latest available data, whether from literature or survey and used as a benchmark for making comparisons to assess the impact of a development or project.
Marine Guidance Note (MGN)	A system of guidance notes issued by the Maritime and Coastguard Agency (MCA), which provide significant advice relating to the improvement of the safety of shipping at sea, and to prevent or minimise pollution from shipping.
Offshore Renewable Energy Installation (OREI)	As defined by MGN 654 (Merchant and Fishing) Safety of Navigation: OREIs – Guidance on United Kingdom (UK) Navigational Practice, Safety and Emergency Response (MCA, 2021). For the purposes of this report and in keeping with the consistency of the EIA, OREI can mean offshore wind turbines

Term	Definition
	and the associated electrical infrastructure such as offshore substations.
Radio Detection and Ranging (Radar)	An object-detection system which uses radio waves to determine the range, altitude, direction or speed of objects.
Safety Zone	A statutory marine zone demarcated for the purposes of safety around a possibly hazardous installation or works/construction area. Where these are referred to as “rolling”, this indicates that the safety zone is dynamic, such that the exclusion area moves in line with active work zones as opposed to holding a fixed location.

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