TotalEnergies	Culzean Floating Wind *A semi-submersible pilot project*	

Navigational Safety and Vessel Management Plan (NSVMP)

GB-CZT-00-TOTA-000008

Rev.	Date	Issued by	Checked by	Approved by
003	15/09/2025	Claire MacDonald	Scott Dillon	Charles Howorth

TABLE OF REVISIONS

Revision	Modification
00A	Draft for review
001	Revision addressing comments received from MD-LOT 20/02/2025.
002	Revision addressing consultation comments received from MD-LOT 27/05/2025
003	Revision addressing consultation 2 comments received from MD-LOT 01/08/2025

DETAILED CHANGE LOG

Date	Rev. Status	References	Description of changes
21/04/2025	Resubmission to MD-LOT for review		Table 1-1 has been updated with details regarding Buoyage Section 6 – has been updated with the details of the ports Section 8 has been updated to include further details of the vessels.
09/07/2025	Resubmission to MD-LOT for review addressing consultation comments	NatureScot comments on NSVMP consultation	As per Comment 1 – Section 7.1 has been updated to include reference to the Scottish Marine Wildlife Watching Code and A Guide to Best Practice for Watching Marine Wildlife.
			As per Comment 2 – Section 6 has been updated confirming that established shipping routes will be favoured.
			As per Comment 3 - Section 1.6 has been updated to include an update to the NSVMP especially from Construction to Operation and Maintenance phase.
			As per Comments 4 & 5 – Section 6 & 6.1 have been updated to reflect the correct working ports for the activities.
		Scottish Fisheries Federation comments on NSVMP consultation	As per Comment 1 & 2 - Section 4.3 has been updated to include more detail about the ERRV's role.
			As per Comment 5 – Section 4.5 has been updated to make it clearer regarding unauthorised vessels approaching the 500m Safety Zone.
			As per Comment 6 – update to Section 5.2 to remove sentence regarding mariner responsibility to look up the Weekly editions of Admiralty NtM.
15/09/2025	Resubmission to MD-LOT for review addressing comments	Scottish Fisheries Federation comments on NSVMP consultation	As per Comment 7 – update to Section 4.3 regarding the ERRV and helicopter operations duties.

	received on 2nd consultation		
			As per Comment 8, Section 4.9 has been included to address the fishing activity displacement and monitoring.
			As per Comment 9, Sections 3.2 and 4.2 have been updated to make it clear that the Safety Zone application has now been approved. Section 4.5 has been updated regarding notifications to vessels regarding the Safety Zone.
			As per Comment 10, Table 5.1 has been updated to include the requirement to submit a 7 day notice reminder before the commencement of any works.
			As per Comment 11, Section 8.2.2 has been updated to include that the use of a Chase Vessel for the tow will be determined during the risk assessment process.
			As per Comment 12, Section 5 has been updated to include further commitments regarding notifications to mariners.

DISTRIBUTION

Stakeholder No.	Document Recipient	Date Issued

Contents

ACRONYMS, ABBREVIATIONS and DEFINITIONS

AHTSV	Anchor Handling Tug Supply Vessel
AIS	Automatic Identification System
AtoN	Aid to Navigation
COLREGs	International Convention of the Prevention of Collisions at Sea
CAA	Civil Aviation Authority
CFW	Culzean Floating Wind
CFT	Culzean Floating Turbine
CLV	Cable Laying Vessels
CMS	Company Management System
CMS	Construction Method Statement
CNS	Central North Sea
CPF	Central Processing Facility
CSV	Construction Support Vessel
DGC	Defence Geographic Centre
DoL	Depth of Lowering
DP	Dynamic Positioning
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ERCoP	Emergency Response Cooperation Plan
ERRV	Emergency Response Rescue Vessel
FLO	Fisheries Liaison Officer
FSO	Floating Storage and Offloading
HMCG	His Majesty's Coastguard
IMO	International Maritime Organisation
KIS-ORCA	Kingfisher Information Service – Offshore Renewables & Cable Awareness
LAT	Lowest Astronomical Tide
LCV	Light Construction Vessel
LMP	Lighting and Marking Plan
LNtM	Local Notices to Mariners
MAIB	Marine Accident Investigation Branch
MCA	Maritime and Coastguard Agency
MD-LOT	Marine Directorate Licensing Operations Team
MGN	Marine Guidance Note
MRCC	Maritime Rescue Coordination Centre
NLB	Northern Lighthouse Board
NMCC	National Maritime Coastguard Centre
NOTAM	Notice to Airmen
NSP	Navigational Safety Plan
NSVMP	Navigational Safety and Vessel Management Plan
NtM	Notice to Mariners
O&M	Operations and Maintenance
OfCom	Office of Communications

OIM	Offshore Installation Manager
OREI	Offshore Renewable Energy Installation
PEMP	Project Environmental Monitoring Plan
PSV	Platform Supply Vessel
ROV	Remotely Operated Underwater Vehicle
RYA	Royal Yachting Association
SFF	Scottish Fishermen's Federation
SOV	Service Operations Vessel
TEPNSUK	TotalEnergies E&P North Sea UK Limited
UKCS	United Kingdom Continental Shelf
UKHO	United Kingdom Hydrographic Office
VHF	Very High Frequency
VMP	Vessel Management Plan
ULQ	Living Quarters and Utility Platform
WHP	Wellhead Platform
WTG	Wind Turbine Generator

1. INTRODUCTION

1.1 Purpose of the Document

This Navigational Safety and Vessel Management Plan (NSVMP) is submitted to satisfy relevant conditions attached to the Marine Licence issued to TotalEnergies E&P North Sea UK Limited (hereafter referred to as TEPNSUK).

1.2 Scope and Objectives of the NSVMP

This Vessel Management and Navigational Safety Plan (VMNSP) has been produced for the purposes of satisfying of the Marine Licenses which require the drafting of a Vessel Management Plan (VMP) and Navigational Safety Plan (NSP) respectively. Given there are elements of both plans that are of direct relevance to each other, as agreed with Marine Directorate Licensing Operations Team (MD-LOT), the VMP and NSP are being submitted as a single document.

The relevant conditions discharged under the NSVMP are detailed in Table 1-1.

1.2.1 Consent Compliance

The NSVMP fulfils the consent conditions for the preparation of a Navigational Safety Plan and a Vessel Management Plan. This NSVMP has been produced as one document as these topics are directly relevant to each other.

Table 1.1 includes reference to how and where the condition clauses have been addressed within the NSVMP.

Table 1.1 Consent conditions to be discharged by this NSVMP

Condition reference	Condition	Relevant section
3.2.2	The Licensee must ensure that, at least five days prior to its engagement in the Licensed Activity, the name and function of any vessel (including the master's name, vessel type, vessel international maritime organisation number and vessel owner or operating company), agent, contractor or subcontractor appointed to engage in the Licensed Activity are fully detailed in the contractor and vessel reports which the Licensee must make available on its website: https://totalenergies.co.uk/	Section 5
3.2.3	The Licensee must, no later than 14 days prior to Commencement of the Licensed Activity, notify the UK Hydrographic Office ("UKHO") at sdr@ukho.gov.uk, of the Licensed Activity.	
	The Licensee must ensure that local mariners and fishermen's organisations are made fully aware of the Works through a local notification. This must	

	be issued at least 14 days before the Commencement of the Licensed Activity. A copy of this notification must be sent to the Licensing Authority within 24 hours of issue.	
	The Licensee must, no later than seven days prior to the Commencement of the Licensed Activity, notify Zone4@hmcg.gov.uk and renewables@hmcg.gov.uk of the proposed Licensed Activity. A copy of the notification must be sent to the Licensing Authority within five working days of the notification being sent.	
	The Licensee must ensure that details of the Licensed Activities are promulgated in the Kingfisher Fortnightly Bulletin, no later than seven days prior to the Commencement of the Licensed Activity to inform the Sea Fish Industry of the vessel routes, the timings and location of the Licensed Activity and of the relevant operations	
Marine Licence Vessel Management Plan 3.2.8	The Licensee must, no later than six months prior to the Commencement of the Licensed Activity, submit a VMP in writing, to the Licensing Authority for its written approval. Commencement of the Licensed Activity cannot take place until such approval is granted. Such approval may only be granted following consultation by the Licensing Authority with NatureScot, MCA, SFF and any such other advisors or organisations as may be required at the discretion of the Licensing Authority.	The NSVMP will be submitted to the Scottish Ministers for approval as required.
	The VMP must include, but not be limited to, the following details: a) The number, types and specification of vessels required; b) How vessel management will be coordinated, particularly during construction, but also during operation; and c) Location of working port(s), the routes of passage, the frequency with which vessels will be required to transit between port(s) and the site	Vessel details are provided in a) Section 8. b) Section 7. c) Working ports are discussed in Section 6 and vessel movements are discussed in Section 9

	and indicative vessel transit corridors proposed to be used during construction of the Works.	
	The confirmed individual vessel details must be notified to the Licensing Authority in writing no later than 14 days prior to the Commencement of the Licensed Activity, and thereafter, any changes to the details supplied must be notified to the Licensing Authority, as soon as practicable, prior to any such change being implemented in the construction of the Works.	Section 8
	The VMP must, so far as is reasonably practicable, be consistent with the CMS, the EMP, the PEMP, the NSP, and the LMP.	Section 1.3
Marine Licence Navigational Safety Plan 3.2.10	The Licensee must, no later than six months prior to the Commencement of the Licensed Activity, submit a NSP, in writing, to the Licensing Authority for its written approval. Commencement of the Licensed Activity cannot take place until such approval is granted. Such approval may only be granted following consultation by the Licensing Authority with MCA, NLB, Royal Yachting Association ("RYA"), SFF and any other navigational advisors or organisations as may be required at the discretion of the Licensing Authority.	The NSVMP will be submitted to the Scottish Ministers for approval as required.
	The NSP must include, but not be limited to, the following issues: a) Navigational safety measures; b) Construction safety zones; c) Notice(s) to mariners and radio navigation warnings; d) Anchoring areas; e) Temporary construction lighting and marking; f) Buoyage; g) Post-construction monitoring; and h) Hydrographic surveys.	a) Section 3 b) Section 3.2 c) Section 5 d) Section 10 e) Section 3.1 f) not applicable - No specific aviation lighting or marking will be implemented during the construction phase. Section 3 in the NSVMP, summarises the navigational safety measure. Also, as per Section 3.2 of the LMP, TEPNSUK will undertake

		promulgation of information to the relevant aviation authorities and stakeholders prior to, and during construction. g) Section 3.7 h) Section 3.7
	The Licensee must confirm within the NSP that they have taken into account and adequately addressed all of the recommendations of the MCA in the current MGN 654, and its annexes that may be appropriate to the Works, or any other relevant document which may supersede this guidance prior to approval of the NSP.	Appendix A

1.3 Linkages with other Consent Plans

The overall objective of the NSVMP is to provide information on vessel management and navigational safety for the construction and, operations and maintenance stages of the Culzean Floating Offshore Wind Turbine Pilot Project (Culzean Floating Wind). It provides the required information on how potential risks and impacts to other marine users and navigational risks will be minimised and mitigated.

At the time of decommissioning, consideration will be given to the vessel management and navigational safety, which will be incorporated in an update to this NSVMP. Therefore, the NSVMP does not currently consider the decommissioning phase of the project.

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

This NSVMP details the proposed navigational safety and vessel management measures, forming part of a set of approved documents (including other mitigation plans required under the Marine Licence). Table 1.3 lists the Consent Plans with linkages to this NSVMP.

Table 1.3 Consent Plans with linkages to this NSVMP

Other Consent Plans and Documents	Linkage with NSVMP
Construction Method Statement (CMS)	The CMS provides details of the methods that will be implemented during the construction phase. The NSVMP has been informed by the descriptions of construction methodologies and construction vessels given in the CMS
Environmental Management Plan (EMP)	Provides details of environmental management procedures that will be employed during construction, Operation and Maintenance, and decommissioning of the Development.

Lighting and Marking Plan (LMP)	Provides details of the lighting and marking to be in place during construction and Operation and Maintenance at the Development.

1.4 Structure of the Plan

Sections 1 and 2 Background to consent requirements and overview of the NSVMP scope and structure.

Sections 3 and 4 Navigational safety measures during construction and, operations and maintenance.

Section 5 Promulgation of Information.

Section 6 Location of Working Ports.

Sections 7, 8 and 9 Vessel coordination, vessel specifications, and transit routes.

Sections 10 and 11 Vessel transit routes and anchorage.

Section 12 Compliance with MGN 654.

Section 13 References.

Appendix A Compliance with MGN 654.

1.5 Plan Audience

All TEPNSUK personnel, contractors and subcontractors involved in the Culzean Floating Wind project must comply, as a minimum, with this NSVMP.

The NSVMP is intended to be referred to by personnel involved in the construction and operation and maintenance of the Culzean Floating Wind project, including TEPNSUK personnel and contractors. Compliance with the NSVMP will be monitored by the Culzean Floating Wind project team.

The latest version of this NSVMP can be obtained from TEPNSUK document management system (Prodom) and from the Marine Directorate website[1]. Copies are also to be held in the following locations:

- TotalEnergies Aberdeen office; and
- All construction, operation, and maintenance vessels; and
- Culzean platform OIM; and
- ERRV Vessel Master.

1.6 Updates and Amendments

It is acknowledged that there may be a requirement for the NSVMP to be revised and updated on occasion as the project progresses (especially when moving from Construction to Operation and Maintenance Phase) to ensure the information is kept up to date. Any revisions will be submitted to MD-LOT for their approval.

[1] https://marine.gov.scot/ml/marine-licence-culzean-floating-offshore-wind-turbine-pilot-project-east-aberdeen-00010724

2. INTRODUCTION

2.1 Project Description

The Culzean Floating Wind project is located in the central North Sea (CNS), approximately 222 kilometres (km) east of Aberdeen in the UK Continental Shelf (UKCS) Block 22/25a. The Culzean Floating Wind project will deploy one floating wind turbine generator (WTG) with a capacity of 3 MW with test floater and mooring system technologies for offshore floating wind. This is a pilot project which aims to; i) test and qualify the floater technology designed by Ocergy, and ii) perform a hybridisation showcase for TotalEnergies to demonstrate the feasibility of platform electrification in an offshore environment.

The Culzean Floating Wind project will be installed approximately 2.5 km west of the Culzean oil and gas platform, linked via an export cable to the Culzean Central Processing Facility (CPF) (Figure 2-1). The wind turbine will be connected to the plant power management system to allow the export of the produced electricity to the site. The Culzean facility is a stand-alone Culzean Floating Wind project involving three bridge linked platforms including a Wellhead Platform (WHP), Central Processing Facility (CPF) with flare tower, and separate Utility and Living Quarters Platform (ULQ).

The Project does not require a grid connection to shore and will be entirely within the offshore region between 12 nautical miles (nm) and the Exclusive Economic Zone (EEZ) boundary.

The floating WTG will be connected to the Culzean facilities via an existing J-tube on the platform. The key components include:

- One WTG;
- One floating substructure;
- Up to six mooring lines
- Up to six drag anchors;
- One 2.5 km long Inter Array Cable (IAC) and ancillaries; and
- Associated scour and cable protection (if required).

The design life for the WTG is 10 years.

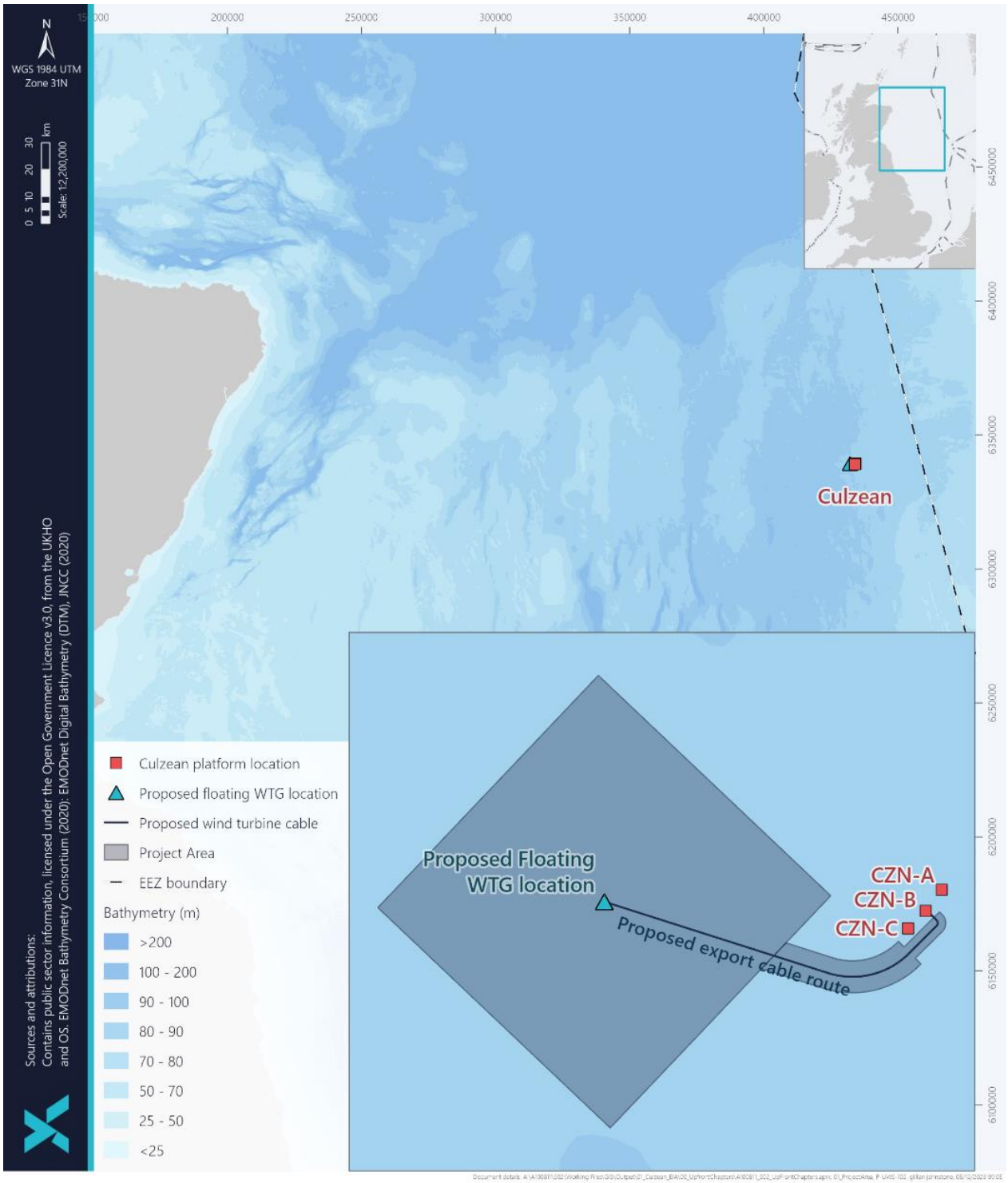

Figure 2-1 Culzean Floating Wind Project Area

3. NAVIGATIONAL SAFETY MEASURES DURING CONSTRUCTION

3.1 Temporary Lighting and Marking

No specific lighting or marking will be implemented during the construction phase. TEPNSUK will undertake promulgation of information to the relevant aviation authorities and stakeholders prior to, and during construction.

All vessels associated with towage to site/manoeuvring of the Culzean Floating Turbine (CFT) and the construction of the Culzean Floating Wind project will be marked and lit as per the International Convention of the Prevention of Collisions at Sea (COLREGs) (International Maritime Organization ((IMO), 1972).

3.2 Construction Safety Zones

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).

A safety zone application has been submitted to Marine Directorate and approved in advance of the operational and maintenance (O&M) phase. TEPNSUK has applied for a 500 m statutory exclusion safety zone, which will remain in place throughout the life of the floating wind turbine (construction, O&M and decommissioning).

The status and location of active safety zones will be promulgated prior to construction commencing.

As per the guidance set out in Marine Guidance Note (MGN) 654 (MCA, 2021) in gaining approval for safety zones, TEPNSUK will monitor the safety zones for infringements, with specific procedures to be set out in the safety zone application. Any infringement will be notified to Marine Directorate and the MCA together with supporting evidence of the infringement, for example Automatic Identification System (AIS) or visual evidence from a guard vessel.

3.3 Guard Vessel

An emergency rescue and recovery vessel (ERRV) is permanently located around the Culzean installation (shared between the Culzean and the Ailsa FSO). The ERRV's role includes vessel monitoring. During construction phase, the area will be monitored as part of the ERRV's day-to-day role. See Section 4.3 for more information regarding the ERRV.

3.4 Cable Installation and Other RAM Operations

RAM (restricted in their ability to manoeuvre) vessels will be utilised during the cable and mooring installation works. RAM vessels involved in the offshore construction (as with all vessels) will comply with the Convention on International Regulations for Preventing Collisions at Sea (COLREGs) (International Maritime Organization (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.

RAM vessels will display lights and shapes to indicate their restrictions. These vessels will transmit safety warnings on Very High Frequency (VHF) to inform other vessels of their actions, using the "Securité" message, if the message contains important information relevant to navigation.

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.

Vessels will also be monitored by the Marine Coordinator (see Section 7). As per Section 3.2, a 500m safety exclusion zone will be in place during the construction stage around the CFW structure where construction activity is underway and while RAM vessels are present.

Cable and Mooring installation Vessels and any Emergency Response Rescue Vessels (ERRVs) will be equipped with AIS and an Automatic Radar Plotting Aid (ARPA). Cable laying and Mooring installation activities will be promulgated through the notification procedures.

3.5 ERCoP

As required under MGN 654 (MCA, 2021), TEPNSUK will produce an Emergency Response Cooperation Plan (ERCoP) for the construction phase in liaison with the MCA, which will be updated as required in line with any relevant changes.

3.6 Damage, Destruction, or Decay of the offshore Project

TEPNSUK will notify MD-LOT as the Licensing Authority, in writing, in the case of injury to, destruction, or decay of the Culzean Floating Wind project during the construction stage. MD-LOT will advise of any remedial action to be taken and any Aids to Navigation (AtoN) to be displayed following consultation from the MCA, NLB, or any such required advisors.

3.7 Post Construction Monitoring and Hydrographic surveys

Post Construction Monitoring and Hydrographic surveys following installation of the Culzean Floating Wind Turbine, would be conducted as per the maintenance requirements as set out in the Operation and Maintenance Plan.

4. NAVIGATIONAL SAFETY MEASURES DURING OPERATION AND MAINTENANCE

4.1 Operational Lighting and Marking

The Lighting and Marking Plan (LMP) (GB-CZT-00-TOTA-000002) will set out the precise details of the lighting and marking of the Culzean Floating Wind project. Marking and lighting of the site will be conducted in agreement with NLB and in line with MCA, NLB, CAA and MoD requirements.

Prior to operations, TEPNSUK will complete an "Application for Statutory Sanction to Alter/Exhibit" form and will submit this to the NLB for the necessary sanction to be granted in relation to the operational phase AtoN.

4.2 Operation and Maintenance Safety Zones

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).

A safety zone application has been submitted to Marine Directorate and approved in advance of the operational phase and maintenance (O&M) phase. TEPNSUK has applied for a 500 m statutory exclusion safety zone which would remain in place throughout the life of the floating wind turbine (construction, O&M and decommissioning).

The status and location of active safety zones will be promulgated prior to construction commencing.

As per the guidance set out in Marine Guidance Note (MGN) 654 (MCA, 2021) in gaining approval for safety zones, TEPNSUK will monitor the safety zones for infringements, with specific procedures to be set out in the safety zone application. Any infringement will be notified to Marine Directorate and the MCA together with supporting evidence of the infringement, for example Automatic Identification System (AIS) or visual evidence from a guard vessel.

4.3 Guard Vessels

An emergency rescue and recovery vessel (ERRV) is permanently located around the Culzean installation (shared between the Culzean and the Ailsa FSO). The ERRV's role includes vessel monitoring. During construction phase, the area will be monitored as part of the ERRV's day-to-day role.

The ERRV covering the field is fitted with a hybrid radar early warning system that alerts of potential collision of vessels to TotalEnergies assets in the area (of which CFW will be one of). In addition to the vessels Marine radar, the Hybrid system incorporates the radar images from a nearby asset which extends the ERRV's radar detection range to approximately 25nm. All potential collision warnings alert the ERRV Bridge officer via an audible and visual alarm.

As the ERRV has duties during helicopter crew change operations for the Culzean oil and gas platform and Ailsa FSO, if the alarm was to go off, such as a vessel coming into close proximity to the CFW, the helicopter operations will be halted (or cancelled depending on time to rectify the issue).

ERRV's conduct a boat / shift handover in the field with a documented handover process. Therefore, is a very rare that an ERRV is offstation (only in extreme weather conditions, when it is highly unlikely that fishermen would be in the area).

4.4 Radio and Radar Beacons

As per construction, the Developer will ensure no radio or radar beacon operating in the marine frequency bands are installed or used within the offshore Project area without prior approval from the OfCom.

4.5 RAM Operations

The type of construction activities to be undertaken may mean that the vessel involved may be displaying Restricted Ability to Manoeuvre (RAM) status such as:

- stationed at a structure
- has any kind of attachment to a structure (other than Walk to Work); or
- is anchored next to a structure for the purposes of construction activity.

RAM vessels may be used during cable maintenance, and mooring installation operations – these vessels will comply with COLREGs. These vessels will transmit safety warnings on VHF to inform other vessels of their actions, using the "Securité" message, if their message contains important information relevant to navigation.

When the 500 m safety zone is in place, the vessel will be assigned guard duties, including the responsibility to monitor the safety zones (and the surrounding area) via Radar, AIS, VHF communications and visual observations. An emergency rescue and recovery vessel (ERRV) is permanently located around the Culzean installation (shared between the Culzean and the Ailsa FSO). The ERRV's role includes vessel monitoring, the area will be monitored as part of the ERRV's day-to-day role.

When an unauthorised vessel is detected to have a CPA (closest point of approach) within 0.5nm of the 500m zone and is continuing to get closer, the designated on-site ERRV will make contact using standard marine procedures to inform the vessel it is potentially close to, infringing the safety zone. Notifications with vessels will only be if the ERRV is under the impression that the vessel is not likely to divert its course prior to reaching the 500 m Safety Zone.

4.6 Subsea Cable Inspections

Post-installation, an as-built survey will be carried out. A monitoring programme will be developed through a risk-based approach and will be described in the Cable Plan (CaP). Concerns noted by other sea users or via inspections in relation to cable burial will be promulgated via the methods set out in Section 5. The MCA and NLB will be informed of any significant changes in burial depth or cable protection.

4.7 ERCoP

As required under MGN 654 (MCA, 2021), TEPNSUK will produce an Emergency Response Cooperation Plan (ERCoP) for the O&M phase in liaison with the MCA, which will be updated as required in line with any relevant changes.

4.8 Damage, Destruction, or Decay of the offshore Project

The TEPNSUK will notify MD-LOT, in writing, in the case of injury to, destruction, or decay of the offshore Project during operations and maintenance. MD-LOT will advise of any remedial action to be taken and any AtoN to be displayed following consultation with the MCA, NLB, and any such required advisors.

4.9 Fishing Activity Displacement and Monitoring

The Culzean field (the area around the Culzean oil and gas installation, the Ailsa FSO and the Culzean Wind Turbine) is located in ICES Rectangle 43F1 and according to the Marine Directorate statistics for 2023 (at time of writing, the 2024 statistics were not available), the fishing in this area is below average for both landings and value when compared to the overall UKCS (Marine Directorate, 2024).

In 2023, a total of 56 days were spent fishing in ICES rectangle 43F1, with fishing effort data being limited only to January, July and November. Data was not available for the remainder of the year, with all other months classed as disclosive which means that fishing took place but at very low levels and that the quantified data is unavailable (although the total days fished for the ICES rectangle are published). To put effort into context, a total of 95,358 days were fished in the UK in 2023 (Marine Directorate, 2024). The average effort per block was equivalent to 574 days in the UKCS in 2023. Therefore, contributions from ICES rectangle 43F1 were below average in terms of effort.

Trawls and seine nets were the only two fishing gears recorded in ICES rectangle 43F1, with trawls used for 52 days in 2023, accounting for 93% of the fishing effort in 2023. Data was disclosive for seine nets (Marine Directorate, 2024).

Average intensity (hours) of fishing between 2010 and 2020 indicates that ICES rectangle 43F1 primarily uses bottom trawls (NMPi, 2025). Average intensity with bottom trawls in the vicinity of Culzean / Ailsa FSO is 2 to 12 hours (Figure), indicating that intensity in the area is low compared to neighbouring locations, which reached an intensity of greater than 2 weeks.

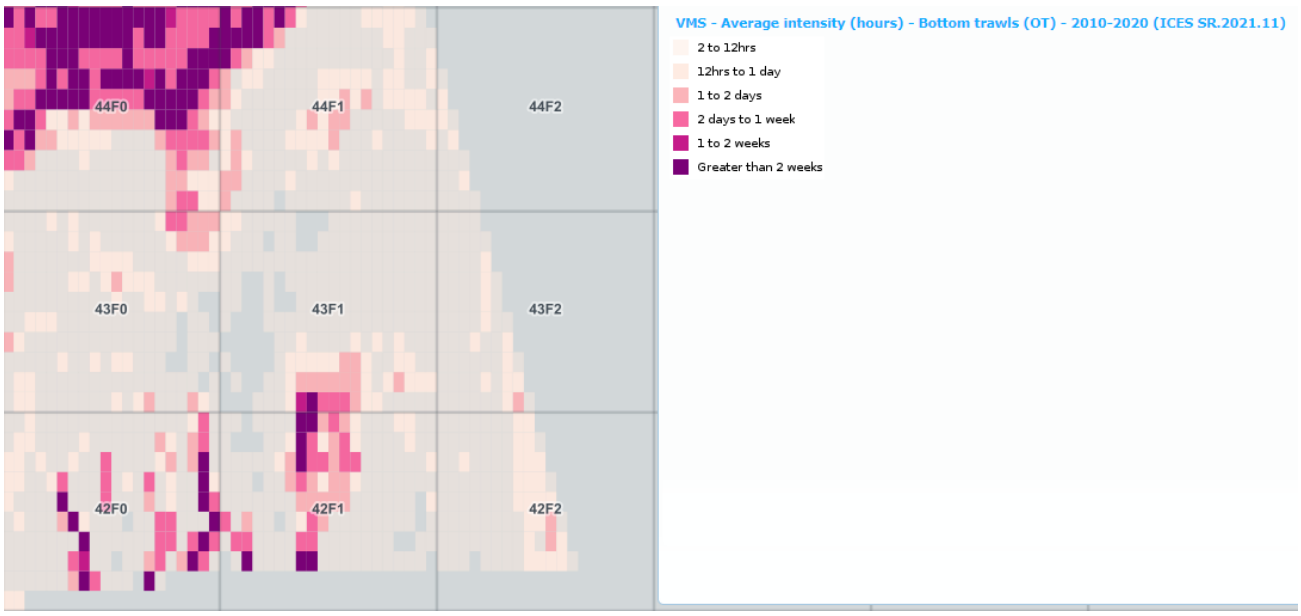

Figure 4.9: 2010 – 2020 Average Intensity (Hours) of Fishing with Bottom Trawls in ICES Rectangle 43F1 and the Surrounding Area (NMPi, 2025)

The fishing activity in the vicinity of the turbine will be reviewed as per the annual Marine Directorate statistics and if there is a significant change to the intensity of the fishing in the area, engagement will be had with the SFF to address any concerns.

5. PROMULGATION OF INFORMATION

This section provides information on the proposed approach to distribution and issuing of Notice to Mariners (NtM) and other appropriate notifications to the relevant stakeholders and other marine users.

Table 5-1 summarises the notifications required under the consent conditions. Further details are provided throughout Section 5.

Table 5-1 Licensed Works Notifications

Notification	Details	Timings	Interested Party
Vessel reports made available on project website	• the name and function of any vessel (including the master's name, vessel type, vessel international maritime organisation number and vessel owner or operating company) • agent, contractor or subcontractor appointed to engage in the Licensed Activity	5 days prior to engagement in the Licensed Activity	Publicly available via project website
Email notification	Commencement of the Licensed Activity	14 days and again 7 days prior to Commencement of the Licensed Activity	UKHO Email: sdr@ukho.gov.uk
Local Notices to Mariners (LNtM)	The Licensee must ensure that local mariners and fishermen's organisations are made fully aware of the Works through a local notification	14 days and again 7 days before the Commencement of the Licensed Activity	Refer to Section 5.1
Email notification	The Licensee must ensure HMCG is notified prior to the Commencement of the Licensed Activity,	7 days prior to the Commencement of the Licensed Activity	HMCG Email: Zone4@hmcg.gov.uk renewables@hmcg.gov.uk
Kingfisher bulletin	The Licensee must ensure that details of the Licensed Activities are promulgated in the Kingfisher Fortnightly Bulletin	7 days prior to the Commencement of the Licensed Activity	Kingfisher bulletin

5.1 Local Notices to Mariners (LNtM)

Local Notices to Mariners (LNtM) will be issued prior to any activity/hazard associated with the Culzean floating wind project which may impact navigational safety, or any key updates at least 14 days prior to any activity. The LNtM will be concise, detailing navigational safety information, including but not limited to information set out in Table 5-2.

Table 5-2 LNtM Content

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 organization and Culzean Floating Wind project issuing the LNtM and any relevant LNtM/s issued prior to the current one.
Details	Date and time of start and finish and location of the works (coordinates) Vessels on site including call signs Activity being undertaken Specific risks to navigation
Contact Details	Sufficient details to allow mariners to contact the organization issuing the LNtM
Guard Vessel and Safety Zone Details	Details of any guard vessels or safety zones present and in force.

Among the organisations that the LNtM will be issued to is the UKHO. Upon receipt of any LNtM, the UKHO will decide whether to include information in their Weekly Admiralty NtM (Section 5.3).

A copy of this notification must be sent to MD-LOT as the Licensing Authority within 24 hours of issue.

5.1.1 Construction Phase

LNtM will be issued prior to the commencement of an any construction activity to the following organisations to the ensure fully aware of the licensable Marine Activity through LNtM:

- Local mariners
- Fisherman's organisations
- His Majesty's Coastguard (HMCG) via the National Maritime Coastguard Centre (NMCC) and Aberdeen Maritime Rescue Coordination Centre (MRCC)

During construction, TEPNSUK will notify the UKHO and the standard list of stakeholders in advance of any notifiable activities including anything that may pose a risk to navigational safety, (e.g., any fault to navigational aids). It is also a requirement under the ERCoP to ensure the MCA are aware of what vessels are on site (and how to contact them). A template approved by the MCA to satisfy this will be held by the MC. General updates will be provided on an ongoing basis via the WNoO (see Section 5.1).

5.1.2 O&M Phase

TEPNSUK will inform the following to ensure made fully aware of the completion of the construction and on commissioning of the Culzean floating wind project.

- Local mariners

- Fisherman's organisations
- NMCC and Aberdeen MRCC

The UKHO will be made aware of the completion of the works to facilitate the promulgation of maritime safety and updating of charts. TEPNSUK 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 Culzean floating wind project.

TEPNSUK will, upon completion of the Culzean floating wind project, provide the 'as built' positions and maximum heights of all the WTG and any subsea infrastructure to the UKHO for aviation and nautical charting purposes (see Section 5.4).

5.2 Admiralty Notices to Mariners

Admiralty NtMs are issued to the UKHO (and other stakeholders) by the Developer in a timely manner, at key phases of the project and are based on the information provided within LNtM. The UKHO then issues these on a weekly basis to provide physical corrections to charts and associated publications. UK Nautical and Aviation Charts

The precise locations and maximum heights of the Culzean WTG and construction equipment over 150 m above LAT, and the details of any fixed lighting fitted to the WTG, will be provided to the UKHO for nautical charting in a timely manner.

The floating wind turbine will be charted by the UKHO using the WTG tower or Culzean Floating Wind project area chart symbol on charts deemed appropriate in terms of scale.

Similarly, the UKHO will display the submarine cables associated with the Culzean floating wind project on charts deemed appropriately scaled.

TEPNSUK will, within one month of the final Completion of the Works, provide the coordinates accurate to three decimal places of minutes of arc for the WTG position and maximum height to UKHO and Defence Geographic Centre (DGC) for nautical and aviation charting purposes. Reporting requirements to the CAA and DGC for aviation purposes are set out in further detail within the Culzean floating wind LMP (GB-CZT-00-TOTA-000002).

The MoD will be notified of the following in writing at least 14 days prior to the Commencement of the Works:

- the earliest date of the Commencement of the Works;
- the earliest date the WTG will be brought into use;
- the maximum height of any construction equipment 50 m or greater in height above mean sea level, to be used; and
- the maximum heights of any WTG, offshore platforms or other, temporary or permanent, offshore structures 50 m or greater in height, above mean sea level, to be deployed or constructed.

5.3 Kingfisher bulletins and KIS-ORCA

The Kingfisher Information Service – Offshore Renewables & 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 via the Kingfisher bulletin (Kingfisher – Offshore and Marine Renewables) or downloadable form the KIS-ORCA website.

Notification to the Kingfisher bulletin may include key updates, for example, an overview of the Development, 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 safety zones, and any relevant drawings or other Culzean Floating Wind project information. They should be submitted 14 days prior to the commencement of the activity. The following sections detail the KIS-ORCA notifications that will be promulgated for each phase of the Culzean floating wind project.

5.3.1 Construction Phase

TEPNSUK will ensure that details of the Culzean floating wind project are promulgated in the Kingfisher 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 works.

TEPNSUK will ensure progress of construction of the Culzean Floating Wind project is promulgated in the Kingfisher bulletin and Notice to Mariners to inform the commercial fishing industry of the vessel routes, and timings and locations, and relevant details of the construction activities. Notifications to Kingfisher bulletin online may include, for example, title of project with vessel name(s), dates, a brief description of activities and a listing of the location(s) of activities.

5.3.2 O&M Phase

TEPNSUK will ensure that the completion of the construction works is promulgated to the Kingfisher bulletin to inform the commercial fishing industry.

TEPNSUK will ensure notices are issued to the Kingfisher bulletin detailing any planned or unplanned maintenance activities that are outside the day-to-day maintenance carried out at the Culzean floating wind project.

5.4 Radio navigational warnings

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;
- Cable laying activities, where a risk is posed to passing traffic;
- Other underwater operations that may constitute potential dangers in or near shipping lanes; and/or
- Vessels not under command or undertaking significant RAM operations.

Once details of an activity have been issued through the standard NtM 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. In the context of radio navigational warnings, the UKHO act as the Navigation Area (NAVAREA) 1 (NEW Atlantic) Coordinator of the IMO and International Hydrographic Organization (IHO) 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.

For information the broadcasts are under the control of the UKHO but are typically made up of the following:

- 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 four hours), or upon receipt of the information if it is of a vital nature; and
- Broadcast by VHF or Medium Frequency (MF) radio selected MCA stations at the next scheduled broadcast and every 12 hours thereafter.

As per the Culzean floating wind project LMP (GB-CZT-00-TOTA-000002), AIS will be installed on the floating wind turbine. TEPNUSK will seek relevant licences from the OfCom in advance of the use of any AIS.

5.5 UK Marine Reporting Requirements

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. Information required shall include:

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

6. LOCATION OF WORKING PORTS

The following port will be used:

- Wergeland Halsvik AS for mooring system storage / floater assembly / load out / WTG integration and commissioning,
- Aberdeen for IAC cable storage

The following sections provide an overview of the key facilities available at these ports. Should any ports be identified as being required for the construction phase that are not described below, an updated version of this NSVMP will be submitted to MD-LOT in advance of those ports being used in connection with the construction of the Development.

The towing vessel will always aim to follow established shipping routes to the final location. These will be documented in a vessel passage plan which will be prepared ahead of the tow.

6.1 Operation and maintenance ports

Will depend on availability and facility requirements but likely out of Norway or Aberdeen / NE Scotland.

- Wergeland (Norway)
- Aberdeen (Scotland)

7. MANAGEMENT AND COORDINATION OF VESSELS

7.1 Construction Phase

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

- A Marine Coordinator (MC) 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 constantly 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 Culzean Floating Wind project to plan the work being undertaken;
- The MC will be the central contact point for the Main Contractor in case of an emergency. They will maintain a copy of the CFW ERCoP; and
- The MC will issue NtMs received from the Main Contractor after being reviewed and approved by the CFW Project Team. Vessel Information and Movements

All marine operations and vessel movements will be planned, giving due regard to the requirements of the NSVMP. Vessel operators should adhere to the guidance and principles of the Scottish Marine Wildlife Watching Code (SMWWC) and A Guide to Best Practice for Watching Marine Wildlife to help to minimise any potential disturbance to marine wildlife during vessel transit and operation.

Bunkering is unlikely to be required during the construction phase. If deemed necessary, the vessels will be performing standard shore-based bunkering.

7.2 Operation and Maintenance Phase

During operation, similar provisions for vessel coordination will be established with marine coordination via the MC throughout the operational phase. Further information on marine coordination during the operational phase will be provided, for approval, in the Operation & Maintenance Programme (OMP). It is currently expected that the following measures of relevance to management and coordination of vessels will be in place:

- A Marine Coordinator (MC) will be responsible for managing operation and maintenance vessel activities;
- Permission for operation and maintenance vessels to enter the Culzean Floating Wind project and any 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 constantly 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 Culzean Floating Wind project to plan the work being undertaken;
- The MC will be the central contact point for contractors in case of an emergency. They will maintain a copy of the CFW ERCoP; and

- The MC will issue NtMs received from contractors after being reviewed and approved by Culzean Asset Management team.

8. VESSEL TYPES AND SPECIFICATIONS

This section outlines the types and specifications of vessels to be utilised during the construction phase (Section 7.1) and O&M phase (Section 7.2), where known specific vessels are presented, in other cases indicative vessels are presented. Where indicative vessel specifications are presented, these may vary depending on market availability.

The requirements under the Offshore Consent to notify the Licensing Authority of the final vessel list 14 days prior to the commencement of licensed activities is noted.

8.1 Standards and Requirements

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

All vessels involved in the construction of the Culzean Floating Wind project will be marked in accordance with the International Regulations for Preventing Collisions at Sea, 1972.

TEPNSUK will require that all construction vessels comply with the procedures and requirements set out in this NSVMP as well as other relevant Consent Plans such as (but not limited to) the Culzean Floating Wind EMP (GB-CZT-00-TOTA-000007) and the LMP (GB-CZT-00-TOTA-000002).

8.2 Construction stage

The following sections present examples of the vessel types that are likely to be used during the construction works. Precise vessels to be used are not currently known, however indicative specifications are given based on the information available at the time. Any vessel names quoted are to be considered indicative only, are provided for the purposes of illustrating a typical vessel of that type and should not be interpreted as a commitment that vessel will be used.

The confirmed individual vessel details will be notified to the Licensing Authority in writing no later than 14 days prior to the commencement of the Culzean floating wind project, and thereafter, any changes to the details supplied will be notified to the Licensing Authority, as soon as practicable, prior to any such change being implemented in the construction or operation.

TEPNSUK will ensure that for any vessel appointed to engage in the works, the following details are available (where applicable) via the Notice to

- Vessel name;
- Vessel function;
- Master's name;
- Vessel type;
- IMO number; and
- Vessel owner or operating company.

8.2.1 Mooring System Installation

The mooring lines will be pre-installed by an anchor handling vessel. Indicative specifications are presented in Table 8-1.

Table 8-1 Anchor Handling Vessel Key Details

Parameter	Value
Vessel role	Mooring system installation / pre-lay
Vessel type	Anchor Handling Tug Supply Vessel (AHTS) (with ROV capabilities) x1
Vessel characteristics	Based upon indicative vessel *Skandi Hera* • Length: approx. 94 m • Breadth: approx. 23 m • Draught: approx. 8 m
Propulsion	Azimuth Thrusters
Mooring / station keeping	Dynamic Positioning

8.2.2 Floating Wind Turbine (WTG) installation

The wind turbine generator and floater components that form the Culzean floating wind turbine shall be delivered from their manufacturing site (Volos – Greece) to the marshalling yard for assembly before being transported to the Culzean site as required. The constructed Culzean floating wind turbine will then be towed to the Culzean site for installation. Indicative specification for the tow vessels (one lead tow vessel and one backup tow vessel) are presented in Table 8-2.

An anchor handling tug will also be required to pick up the pre-laid mooring lines. This vessel is likely to be similar to the one that may be used for the tow (see Section 8.2.1).

The use of a Chase Vessel for the tow will be determined during the risk assessment process.

Table 8-2 Tow Vessel Key Details

Parameter	Value
Vessel role	Towing operations
Vessel type	Ocean going tug / anchor handling tug x 2
Vessel characteristics	Length: approx. 75 m 180 Te bollard pull
Propulsion	Azimuth Thrusters
Mooring / station keeping	Dynamic Positioning

Table 8-3 Mooring Hook-Up Vessel Key Details

Parameter	Value
Vessel role	Mooring Hook-Up
Vessel type	Anchor Handling Tug Supply Vessel (AHTS) (with ROV capabilities) x1
Vessel characteristics	Based upon indicative vessel *Skandi Hera*

	• Length: approx. 94 m • Breadth: approx. 23 m Draught: approx. 8 m
Propulsion	Azimuth Thrusters
Mooring / station keeping	Dynamic Positioning

8.2.3 IAC Installation

The IAC (which exports power from the floating wind turbine to the Culzean platform) is expected to be loaded onto the light construction vessel (LCV) at the marshalling port or port of opportunity for load-out. Prior to the IAC being installed, pre-lay survey works will be undertaken by the mooring installation vessel (Section 8.2.1). No boulder or debris clearance are currently expected.

Cable installation is expected to be undertaken by an LCV. The cable may be wet stored on the seabed prior to the floating wind turbine's arrival. Where the cable is wet stored, the AHTS expected to be involved in the hook-up work is described in Section 8.2.1 above and are not repeated here.

A dedicated service operations vessel (SOV) (Platform Supply Vessel type) will be required to assist with the pull in operations on the Culzean Floating Wind side. The SOV will allow the transfer of the pull-in teams and equipment to the Culzean Floating Wind. Indicative specification for the IAC cable installation vessel(s) are presented in Tables 8-3 and 8-4.

Table 8-4 IAC Installation Vessel Key Details

Parameter	Value
Vessel role	Cable installation operations
Vessel type	Light Construction Vessel (LCV) x1
Vessel characteristics	Based upon indicative vessel *Skandi Hera* • Length: approx. 94 m • Breadth: approx. 23 m Draught: approx. 8 m
Propulsion	Azimuth Thrusters
Mooring / station keeping	Dynamic Positioning

Table 8-5 Installation Support Vessel Key Details

Likely to be Platform Supply Vessel (PSV) and walk to work.

Parameter	Value
Vessel role	Construction support
Vessel type	Platform Supply Vessel (PSV) x1

Vessel characteristics	Based upon indicative vessel *Falnes Tide* • Length: approx. 85 m • Breadth: approx. 20 m Draught: approx. 8 m
Propulsion	Azimuth Thrusters
Mooring / station keeping	Dynamic Positioning

To facilitate the connection of the IAC to the Culzean platform, some preparatory works at Culzean platform will be required. This work will be undertaken either by the LCV or the AHTS used to install the mooring lines. The vessels expected to be involved in these Culzean platform preparatory works are described in Sections 8.2.1 and 8.2.3 above and are not repeated here.

8.2.4 Post-Lay Trenching Vessels

Once the cable is installed on the seabed, cable burial will be carried out using a jet-trencher or mechanical trencher as described in the Culzean Floating Wind Cable Plan (GB-CZT-00-TOTA-000010). The LCV (1 vessel) used to install the IAC will undertake cable trenching operations. The LCV is described in Section 8.2.3 above and not repeated here. Alternatively, a dedicated cable trencher vessel (TSV) shall be utilised and is presented in table 8.2.6.

Table 8-6 IAC Trencher Vessel Key Details

Parameter	Value
Vessel role	Cable burial operations
Vessel type	Trenching Support Vessel (TSV) x1
Vessel characteristics	Based upon indicative vessel *Grand Cantom 3* • Length: approx. 128m • Breadth: approx. 25 m Draught: approx. 11 m
Propulsion	Azimuth Thrusters
Mooring / station keeping	Dynamic Positioning

8.2.5 Post-Lay Survey

Following cable burial, a post-trench survey of the cable will be completed. Where the target Depth of Lowering (DoL) has not been reached, additional cable protection measures may be required which will be as described in the Culzean Floating Wind Cable Plan (GB-CZT-00-TOTA-000010). The TSV is likely to be the vessel to perform this scope of work, and is described in Table 8-6 above and not repeated here.

8.2.6 CFW Commissioning Support Vessel

A Construction Support Vessel (CSV) or Service Operations Vessel (SOV) may be utilised to facilitate the hook-up and commissioning of the floating turbine to allow personnel transfer to the floater. This is described in section 8.2.3 and Table 8.5 and shall not be repeated here.

8.2.7 Guard vessels

An emergency rescue and recovery vessel (ERRV) is permanently located around the Culzean installation (shared between the Culzean and the Ailsa FSO). The ERRV's role includes vessel monitoring, in this capacity will be acting as a guard vessel during construction and O&M phase. The area will be monitored as part of the ERRV's day-to-day role.

Table 8-7 Guard Vessel Key Details

Parameter	Value
Vessel role	ERRV acting as a guard vessel
Vessel type	ERRV x1
Vessel characteristics	Based upon Culzean ERRV *Vos Prospector* • Length: approx. 60 m • Breadth: approx. 13 m • Draught: approx. 5 m
Propulsion	Azimuth propellers
Mooring / station keeping	Dynamic Positioning

8.3 Operational Stage

An accurate account of the vessels required during the operational phase cannot be provided at this stage, however, to carry out regular scheduled maintenance, it is planned that a PSV will be used for the upkeep of the turbine. Vessel details and crew transfer operations are to be confirmed / awarded.

It is also anticipated that an ROV will be used to conducts underwater inspection of the hull, appurtenances, mooring system, air chambers (CATS system) and IAC, which is to be done every 3 years. The ROV will be loaded on an appropriate vessel which shall be confirmed in due course.

9. NUMBER AND MOVEMENTS OF VESSELS

9.1 Construction Vessels

The number of vessels within the offshore Project area at any one time will vary throughout the construction stage. Peak vessel numbers will coincide with times of major installation works.

Table 9-1 presents the indicative numbers and their main construction activities for each of the anticipated vessels during the construction stage. Details are also provided on the expected number of return trips for each vessel type (a transit to the Culzean site and then back to port) they will make (where available). The number of transits provided is a best estimate based on the available information at the time of writing, the actual numbers may differ during the construction stage.

Table 9-1 Indicative construction vessel numbers, ley construction activities and return journeys

Vessel type	Anticipated total number	Key construction activities	Approximate number of return journeys
Mooring system installation			
AHTS	1	Pre-lay the mooring system	1
Floating wind turbine installation			
AHTS	2	Tow floating wind turbine Pick-up and connect mooring lines	1
Cable installation			
CLV	1	Cable installation	1
Installation support vessel	1	Cable pull-in and Commissioning	1
CLV or AHTS	1	Cable pick-up and commissioning (where pre-laid)	1
CLV or AHTS	1	Cable preparatory works at Culzean platform	1
CLV	1	Cable burial and survey	1
CLV	1	Post-lay survey / Protection (if required)	1
Hook-up and commissioning			
SOV	1	Hook-up and commissioning of the floating turbine	1
Guard vessel			
ERRV	1	Guard vessel	1

9.2 O&M Vessels

A PSV used for the TEPUK CNS asset (supporting Elgin Franklin, Culzean and Ailsa FSO) will be used to transfer personnel and maintenance materials to the Culzean Floating Wind Turbine. Therefore, there is no additional

vessels to the Culzean area, to accommodate Culzean Floating Wind. The PSV will remain on station at CFW whilst personnel are onboard.

An emergency rescue and recovery vessel (ERRV) is permanently located around the Culzean installation (shared between the Culzean and the Ailsa FSO) and will support the wind turbine. The ERRV's role includes vessel monitoring.

10. ANCHORING

All vessels planned for use during construction and O&M, will be DP vessels. No anchoring is planned or required.

11. COMPLIANCE WITH MGN 654

The offshore consent conditions require the Developer to demonstrate that the NSVMP has adequately addressed all of the recommendations of MGN 654 (MCA, 2021) and its annexes, that may be appropriate to the offshore project, or any other relevant document which may supersede said guidance prior to approval of the NSVMP.

MGN 654 has been reviewed and all appropriate recommendations (at this pre-construction stage of the offshore Project) have been identified. In each case it has been indicated where each of these recommendations has been addressed within this document (or other relevant consent plans) for the Culzean floating wind project. The review summary is provided in Appendix A.

12. REFERENCES

Anatec (2024). Culzean Floating Offshore Wind Turbine Pilot Project Navigational Risk Assessment.

IALA (2021a). G1162 the marking of offshore man-made structures. Available online at: https://www.ialaaism.org/product/g1162/.

IALA (2021b). R0139 the marking of offshore manmade structures, Available online at: https://www.ialaaism.org/product/r0139/.

IMO, 1972, COLREGS.IMO: London.

Marine Directorate, Scottish Government (2024). 2023 Scottish Sea Fisheries Statistics - Fishing Effort and Quantity and Value of Landings by ICES Rectangles. doi: 10.7489/12535-1. Available online at: https://data.marine.gov.scot/dataset/2023-scottish-sea-fisheries-statistics-fishing-effort-and-quantity-and-value-landings-ices

MCA, 2021. 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.

NMPi (2025) Marine Scotland - National Marine Plan Interactive

APPENDIX A MGN 654 COMPLIANCE

MGN Section	Checklist	Where Addressed
4.5 Site and Installation Coordinates.	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 (GIS) data, preferably in Environmental Systems Research Institute (ESRI) 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.	Section 5 details the methods for promulgation of information during the various stages of the Culzean floating wind project. The ERCoP (see Section 3.6) will also describe the procedures for communication of OREI positions in the event of an emergency
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.	Navigational risk has been assessed within the Culzean Floating Wind EIA Report which included a Navigation Risk Assessment (Anatec, 2024).

	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, *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 e.g. 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, maritime assistance service, counter pollution and salvage incident response.	a. An ERCoP will be developed for the construction, operation and decommissioning phases of the OREI.	See Sections 3.6 and 4.7.
	b. The MCA's guidance document Offshore Renewable Energy Installation: Requirements, Advice and Guidance for Search and Rescue and Emergency Response for the design, equipment and operation requirements will be followed.	As per Section 12 Culzean Floating Wind will comply with MGN 654 and its annexes.
	c. A SAR checklist will be completed to record discussions regarding the requirements, recommendations and	This will be completed in liaison with the MCA.

	considerations outlined in the above document (to be agreed with MCA)	
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 Culzean Floating Wind project *iii.* Post-construction: Cable route(s) *iv.* Post-decommissioning of all or part of the development: the installed generating assets area and cable route	Culzean Floating Wind will comply with MGN 654 hydrographic requirements. ii) During the inspection visits to the asset in line with the floating wind turbine maintenance schedule.
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 (MSI) dissemination methods.	See Section 5.
	Continuous watch by multi-channel VHF, including Digital Selective Calling (DSC).	See Section 7
	Safety zones of appropriate configuration, extent and application to specified vessels.	See Sections 3.2 and 4.2.
	Provision of AtoN as determined by the GLA.	See Sections 3.1 and 4.1.
	Monitoring by radar, AIS, CCTV or other agreed means	Associated requirements to be agreed as part of the SAR checklist process.
	Appropriate means for OREI operators to notify, and provide	See Sections 3.2 and 4.2.

	evidence of, the infringement of safety zones.	
	Creation of an Emergency Response Cooperation Plan with the MCA's Search and Rescue Branch for the construction phase onwards.	See Sections 3.6 and 4.7.
	Use of guard vessels, where appropriate	See Sections 3.3 and 4.3.