

XLINKS' MOROCCO-UK POWER PROJECT

Environmental Statement Appendix

Volume 3, Appendix 5.2: Outline Navigational Safety and Vessel Management Plan (NSVMP)

Document Number: 6.3.5.2

PINS Reference: EN010164/APP/6.3

APFP Regulations: 5(2)(a)

November 2024

For Issue

XLINKS' MOROCCO – UK POWER PROJECT

Document status					
Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
For Issue	Application	Anatec	Xlinks 1 Ltd	Xlinks 1 Ltd	November 2024

Prepared by:

Anatec / APEM

Prepared for:

Xlinks 1 Limited

Contents

1	OUTLINE NAVIGATIONAL SAFETY AND VESSEL MANAGEMENT PLAN (NSVMP)	1
1.1	Introduction	1
1.2	Navigational Safety Measures	4
1.3	Promulgation of Information	5
1.4	Location of Working Ports, Transit Routes and Anchoring	9
1.5	Project Vessel Details	10
1.6	Environmental Sensitivities Relevant to Vessel Management	13
1.7	Compliance with MGN 654 and the Application	14

Tables

Table 1.1:	Content of LNtM	5
Table 1.2:	Construction Vessel Activities Summary	11
Table 1.3:	Cable Fault/Repair Vessel Activities Summary	13

Figures

Figure 1.1	Overview of the Offshore Cable Corridor	2
------------	---	---

Acronyms

Acronym	Meaning
μT	Microtesla
AIS	Automatic Identification System
AtoN	Aids to Navigation
CBRA	Cable Burial Risk Assessment
COLREGs	Regulations for the Prevention of Collisions at Sea
CTVs	Crew Transfer Vessels
DWT	Dead Weight Tonnage
EMF	Electromagnetic Field
ERP	Emergency Response Plan
FOC	Fibre Optic Cable
HDD	Horizontal Directional Drilling
HMCG	His Majesty's Coastguard
HVDC	High Voltage Direct Current
IHO	International Hydrographic Organisation
IMO	International Maritime Organization
KIS-ORCA	Kingfisher Information Service – Offshore Renewables & Cable Awareness
kV	Kilovolt
LNtM	Local Notifications to Mariners
m	Metres
MAIB	Marine Accident Investigation Branch
MCA	Maritime and Coastguard Agency
MDS	Maximum Design Scenario
MF	Medium Frequency
mG	Milligauss
MGN	Marine Guidance Note
MHWS	Mean High Water Springs
MMO	Marine Management Organisation
MoD	Ministry of Defence
MRCC	Marine Rescue Co-ordination Centre
NAVAREA	Navigation Area
NAVTEX	Navigational Telex
NSVMP	Navigational Safety and Vessel Management Plan
NtM	Notifications to Mariners
RAM	Restricted in their Ability to Maneuverer
SAC	Special Area of Conservation
SOLAS	Safety of Life at Sea
UK	United Kingdom
UKHO	United Kingdom Hydrographic Office
VHF	Very High Frequency

1 OUTLINE NAVIGATIONAL SAFETY AND VESSEL MANAGEMENT PLAN (NSVMP)

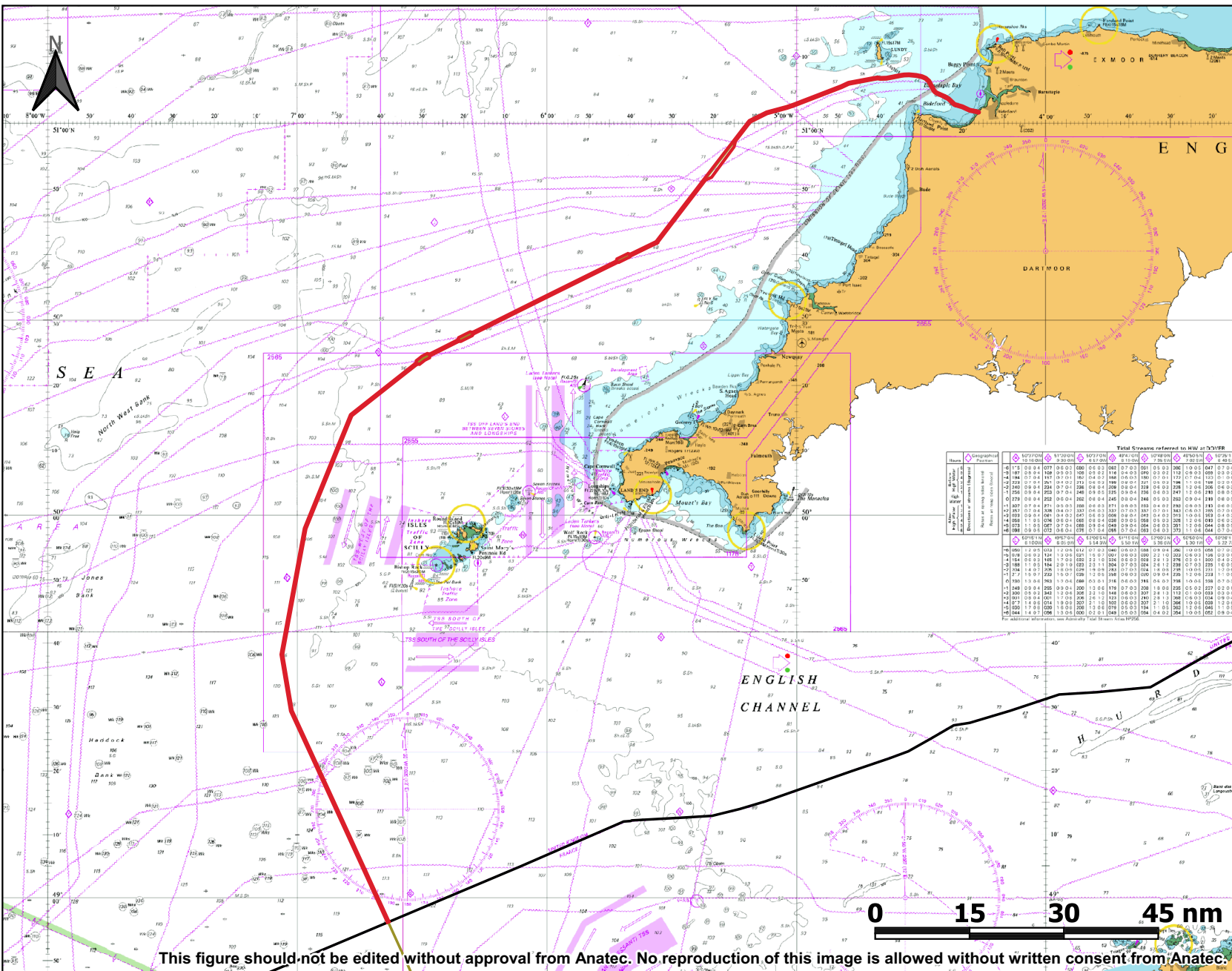
1.1 Introduction

Project Overview

- 1.1.1 Anatec Ltd were commissioned by Xlinks 1 Limited (the 'Applicant') to produce an Outline Navigational Safety and Vessel Management Plan (NSVMP) for the United Kingdom (UK) elements of Xlinks' Morocco-UK Power Project.
- 1.1.2 For ease of reference, the UK elements of Xlinks' Morocco-UK Power Project are referred to in this appendix as the 'Proposed Development'. Specifically, this appendix relates to the offshore elements of the Proposed Development seaward of Mean High Water Springs (MHWS). This Outline NSVMP details vessel types, numbers and movements anticipated as part of the Proposed Development, as well as highlighting how these will be managed and how information will be promulgated throughout the construction and operation and maintenance phases of the Proposed Development. This Outline NSVMP forms Appendix 5.2 to Volume 3, Chapter 5: Shipping and Navigation of the Environmental Statement (ES).
- 1.1.3 This Outline NSVMP forms part of the application for Development Consent and is listed as a condition on the draft deemed Marine Licence, which is provided as a Schedule to the draft Development Consent Order. It is a further requirement of the Offshore Construction Environmental Management Plan (an Outline Offshore Construction Environmental Management Plan is presented as document ref. 7.9).

Development Overview

- 1.1.4 The Offshore Cable Corridor within UK waters is approximately 370 km in length, running from the landfall area at Cornborough Range within Bideford Bay, passing 23 nm to the west of the Isles of Scilly and south across the entrance to the English Channel, to the boundary with French Waters.
- 1.1.5 The Offshore Cable Corridor is presented in **Figure 1.1**.



- Legend**
- Xlinks' UK Offshore Cable Corridor
 - Indicative Cable Centreline
 - UK Exclusive Economic Zone (EEZ)

Total Crossings referred to MW at 700MB

Number	Geographic	00770N	01200N	01700N	02200N	02700N	03200N	03700N	04200N	04700N	05200N	05700N
01	00770N	00770N	01200N	01700N	02200N	02700N	03200N	03700N	04200N	04700N	05200N	05700N
02	01200N	00770N	01200N	01700N	02200N	02700N	03200N	03700N	04200N	04700N	05200N	05700N
03	01700N	00770N	01200N	01700N	02200N	02700N	03200N	03700N	04200N	04700N	05200N	05700N
04	02200N	00770N	01200N	01700N	02200N	02700N	03200N	03700N	04200N	04700N	05200N	05700N
05	02700N	00770N	01200N	01700N	02200N	02700N	03200N	03700N	04200N	04700N	05200N	05700N
06	03200N	00770N	01200N	01700N	02200N	02700N	03200N	03700N	04200N	04700N	05200N	05700N
07	03700N	00770N	01200N	01700N	02200N	02700N	03200N	03700N	04200N	04700N	05200N	05700N
08	04200N	00770N	01200N	01700N	02200N	02700N	03200N	03700N	04200N	04700N	05200N	05700N
09	04700N	00770N	01200N	01700N	02200N	02700N	03200N	03700N	04200N	04700N	05200N	05700N
10	05200N	00770N	01200N	01700N	02200N	02700N	03200N	03700N	04200N	04700N	05200N	05700N
11	05700N	00770N	01200N	01700N	02200N	02700N	03200N	03700N	04200N	04700N	05200N	05700N

This figure should not be edited without approval from Anatec. No reproduction of this image is allowed without written consent from Anatec.



Project:
Xlinks' Morocco-UK Power Project

Figure Title:
Figure 1.1: Overview of the Offshore Cable Corridor

Date: 13/11/2024 Drawn: LD Checked: LC

Coordinate System: WGS 84 / World Mercator

- 1.1.6 Technical parameters of the Proposed Development are presented in Volume 1, Chapter 3: Project Description of the ES. It is noted that there are elements of flexibility remaining in the final design e.g. with regards specific cable trenching techniques, or volume of rock protection required at specific locations. The ES presents the most likely scenarios having regard for the outline Cable Burial Risk Assessment (CBRA); see e.g. Volume 1, Chapter 3: Project Description of the ES. The ES Shipping & Navigation assessments (Volume 3, Chapter 5: Shipping & Navigation of the ES) and this NSVMP have been undertaken where possible adopting a Maximum Design Scenario (MDS) or maximum envelope type approach.

Scope and Objectives

- 1.1.7 This Outline NSVMP has been produced for the purpose of providing the required information to the MMO on vessel management and navigational safety during the construction, and operation and maintenance phases, in order to mitigate the impact of project vessels and the navigational risk to other legitimate users of the sea.
- 1.1.8 The information provided in this document is based on the current understanding of the baseline environment and how the Proposed Development will be constructed and operated using the best available technologies, in compliance with current legislation and best practice at the time of writing.
- 1.1.9 The finalised NSVMP will be produced by the Offshore Principal Contractor, who will develop the final, specific plan incorporating for example specific construction vessels and associated transit options. It is expected that the NSVMP will be further reviewed as required and updated throughout the Project (see **Updates and amendments to the NSVMP** section below). Information contained within this document is accurate at the time of submission, but it is recognised that changes or updates will be required to reflect further detail provided on project vessels and movements as the Proposed Development progresses, as well as any relevant feedback during consultation or changes in best practice.

Updates and amendments to the NSVMP

- 1.1.10 It is acknowledged that the final NSVMP (produced by the Offshore Principal Contractor), 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 Proposed Development;
 - Significant change in the methods or schedule outlined within this document;
 - Significant changes in knowledge of baseline information or the environment of relevance to the contents of this document;
 - Significant changes in legislation or best practice guidance;
 - Significant stage in project lifecycle; and

- Any scheduled reviews put in place by the Applicant or regulatory authorities.

1.2 Navigational Safety Measures

- 1.2.1 The following subsections present the navigational safety measures that will be implemented during all phases of the Proposed Development.

Temporary Lighting and Marking

- 1.2.2 Temporary lighting and marking of the HDD exit points, if required during the construction phase, will be agreed in consultation with Trinity House and the MCA.
- 1.2.3 Note, following completion of construction and installation of cable protection at the HDD exit points, there are no anticipated above seabed level structures required, hence no Operation & Maintenance phase lighting and marking expected.

Guard Vessels

- 1.2.4 Guard vessels are anticipated to be deployed around active cable laying operations and at c.10 nm intervals along any lengths of cable temporarily exposed on the seabed. Guard vessels may also be required during any necessary cable repair activities during the operation and maintenance phase.

Marine Coordination

- 1.2.5 It is anticipated that movements of project vessels will be managed by the Offshore Principal Contractor.

Cable Laying and Other RAM Operations

- 1.2.6 Restricted in their ability to manoeuvre (RAM) vessels will be utilised during the cable installation works and HDD operations. RAM vessels are those restricted in their ability to manoeuvre as a result of the nature of the work they are undertaking and therefore are restricted in avoiding an approaching vessel(s). All RAM vessels involved in the construction of the Proposed Development will comply with the Convention on International Regulations for Preventing Collisions at Sea (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.
- 1.2.7 RAM vessels will display lights and shapes to indicate their restrictions. They will transmit safety warnings on Very High Frequency (VHF) 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.
- 1.2.8 RAM vessels will comply with vessel type regulation information transmitted through AIS and show current navigational status at all times to ensure other vessels equipped with AIS can identify that they are RAM.

- 1.2.9 Cable laying activities will also be promulgated through the notification procedures. Guard vessels will also be deployed every c.10 nm along the Offshore Cable Corridor where there are sections of temporarily exposed cable on the seabed.
- 1.2.10 Vessels which are RAM, such as the cable lay vessel, will request safe passing distances from third-party vessels, notionally 500 m, to reduce the risk of close encounters and collisions.

Emergency Response Plan

- 1.2.11 An offshore Emergency Response Plan (ERP) will be in place which will detail the emergency planning and response control measures to be implemented during the construction phase.
- 1.2.12 The ERP will be produced by the construction contractor ahead of commencement of offshore construction activities. The ERP would form part of the final offshore CEMP.

Injury, Destructions, or Decay of the Proposed Development

- 1.2.13 The Applicant will notify the Licencing Authority, in writing, in the case of injury to, destruction, or decay of the Proposed Development. The Licencing Authority will advise of any remedial action to be taken and any Aids to Navigation (AtoN) to be displayed following consultation from the MCA, Trinity House, or any such required advisors.

1.3 Promulgation of Information

- 1.3.1 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.

Local Notifications to Mariners

- 1.3.2 Local Notifications to Mariners (LNtM) will be issued in advance of any activity associated with the Proposed Development 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.
- 1.3.3 The LNtM will be concise, detailing navigational safety information and may include, but not limited to, the information set out in **Table 1.1**. A standard template will be defined.

Table 1.1: Content of LNtM

LNtM Content Type	Content details
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	<ul style="list-style-type: none"> • Date/time of start/finish and location of the works (coordinates); • Vessels on site 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 Details	Details of any guard vessels present.
Hyperlinks to Additional Information	Provided only if absolutely necessary.

1.3.4 Among the organisations that the LNtM will be issued to is the United Kingdom Hydrographic Office (UKHO). Upon receipt of a LNtM, the UKHO will decide whether to include information in their Weekly Admiralty NtM, as described in the ‘**Admiralty Notices to Mariners (UKHO)**’ section below.

LNtM Issued Prior to the Commencement of Construction

1.3.5 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 (HMCG), in this case the Maritime Rescue Coordination Centres (MRCCs) in Falmouth and Milford Haven, are made fully aware of the Licensable Marine Activity through LNtM (or any other appropriate means).

1.3.6 Notifications of works will also be issued to ferry operators with routes in proximity to the Proposed Development at the time of construction, as requested during consultation. Relevant ferry operators identified and consulted during the ES process included:

- Brittany Ferries;
- DFDS Ferries;
- Lundy Company Ltd;
- Irish Ferries; and
- Stena Line.

LNtM upon Commissioning and During Operation and Maintenance

1.3.7 The Applicant will ensure that local mariners, fisherman’s organisations, and the Maritime Rescue Co-ordination Centres (MRCC) are made fully aware of the completion of the construction works and commissioning of the Proposed Development.

1.3.8 The Applicant will ensure that relevant stakeholders are informed via LNtM of any planned and unplanned maintenance activities.

Admiralty Notices to Mariners (UKHO)

- 1.3.9 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 NtM which can be found on the UKHO website and to make necessary corrections to the charts on board their vessel.

Hydrographic Charts

- 1.3.10 The precise location of the Proposed Development will be provided to the UKHO for nautical charting.
- 1.3.11 The Proposed Development will be charted by the UKHO using the submarine cable chart symbol (as presented in *Symbols and Abbreviations used on ADMIRALTY Paper Charts NP5011* (UKHO, 2020)) on charts deemed appropriate in terms of scale.

Kingfisher Bulletins and KIS-ORCA

- 1.3.12 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 in fortnightly bulletins (Kingfisher – Offshore and Marine Renewables) or downloadable from the KIS-ORCA website.
- 1.3.13 Notification to the Kingfisher fortnightly bulletin may include, for example, an overview of the Proposed 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 project information.
- 1.3.14 The following subsections detail the KIS-ORCA notifications that will be promulgated for each phase of the Proposed Development.

Notifications Prior to the Commencement of Construction

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

Notifications During Construction

- 1.3.16 The Applicant, through the marine coordination centre, will ensure that the progress of construction of the Proposed Development 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.

Notifications upon Commissioning and During Operation and Maintenance

- 1.3.17 The Applicant will ensure that the commissioning of the Proposed Development is promulgated to the Kingfisher fortnightly bulletin to inform the commercial fishing industry.
- 1.3.18 The Applicant will ensure notices are issued to the Kingfisher fortnightly bulletin detailing any planned or unplanned maintenance activities required on the Proposed Development.

Radio Navigational Warnings

- 1.3.19 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:
- Establishing new AtoN (if required);
 - 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.
- 1.3.20 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.
- 1.3.21 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 Organisation (IHO) Worldwide Navigational Warning Service and also as the AUIK 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.
- 1.3.22 The broadcasts are under the control of the UKHO but tend to 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 four hours), or upon receipt of the information if it is of a vital nature; and
 - Broadcast by VHF or Medium Frequency (MF) radio at selected MCA stations at the next scheduled broadcast and every 12 hours thereafter.

UK Marine Incident Reporting Requirements

- 1.3.23 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.

1.3.24 Information required shall include:

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

Other Notifications

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

1.3.26 Regular liaison will be undertaken with the pilotage service at Bideford to reduce potential for any impact on vessel access and disruption to local shipping activities.

1.4 Location of Working Ports, Transit Routes and Anchoring

Working Ports

1.4.1 Details and locations of working ports will be included in the finalised NSVMP, which will be produced by the Offshore Principal Contractor.

1.4.2 Where possible, guard vessels will be sourced from local ports and the local fishing community in the vicinity of the Proposed Development.

Indicative Transit Route Corridors

1.4.3 Details of indicative transit route corridors to be included in the finalised NSVMP which will be produced by the Offshore Principal Contractor.

1.4.4 As working ports are yet to be confirmed, and due to the nature of the Proposed Development, indicative transit route corridors are not confirmed at this stage. Precise details of the routes taken by vessels will depend on the nature of the vessels, the working location along the Proposed Development, and the choice of working ports.

1.4.5 Indicative transit route corridors once defined will not be intended to be prescriptive and are unlikely to be followed precisely by every vessel; however, they will be designed to give an indication to other users of the areas within which they may expect to encounter vessels associated with the Proposed Development.

1.4.6 Significant passing distances will be maintained to the Bristol Channel Approaches Special Area of Conservation (SAC), and the Lundy Marine Protection Area where possible, to reduce any Noise and Vibration impacts in these areas. It is noted that Noise and Vibration impacts are not considered to be significant in these areas, however preferentially avoiding these is considered to be good practice.

- 1.4.7 Vessel transit route corridors will also likely maintain clearance from the coast where possible.
- 1.4.8 All vessels shall passage plan as per the *International Convention for the Safety of Life at Sea (SOLAS)* (IMO, 1974). In addition, vessels may take alternatives from these indicative routes 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 NtM or other such sources;
 - Vessels originating from or bound for 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 theirs or another vessel.

Anchoring

- 1.4.9 During the construction period, it may be necessary for Project vessels to anchor. 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.

1.5 Project Vessel Details

- 1.5.1 This section details the standards and requirements that Project vessels will be required to meet, as well as outlining the numbers and types of vessels required in the construction phase and the operation and maintenance phase.
- 1.5.2 Precise details of the vessels anticipated to be involved in the construction phase will be provided in the finalised NSVMP which will be produced by the Offshore Principal Contractor.

Standards and Requirements

- 1.5.3 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.
- 1.5.4 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.
- 1.5.5 All vessels involved in the construction of the Proposed Development will be lit in accordance with the requirements of COLREGs (IMO, 1972/77). All construction vessels will be equipped with AIS receivers and transmitters.
- 1.5.6 The Applicant will require all construction vessels to comply with the procedures set out in this document and any other relevant plan.

Construction Vessels

- 1.5.7 The number of vessels required for the Proposed Development at any one time will vary during the construction period, with peaks in vessel activity reflecting the timing of major installation works.
- 1.5.8 For each vessel type anticipated to be working on the Proposed Development, **Table 1.2** presents 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 Offshore Cable Corridor, and then back to port) they will make (if available). It should be noted that the number of transits given is a conservative best estimate based on the available information at the time of writing, and the actual numbers may differ during the construction phase. The indicative total number of days may change based on the selection of the construction port.

Table 1.2: Construction Vessel Activities Summary

Vessel Type	Anticipated Total Number	Key Construction Activities	Commentary	Indicative Total Number of Days
Cable lay vessel	2	Cable installation	Maximum of 2 at crossover, but only 1 laying at a time	144
Construction support vessel e.g. trenching support	5	Pre-lay trenching Cable protection	5 construction support vessels in total (cable protection + pre-lay trenching)	457
Rock protection vessel	2	Rock protection		352
Jack-up barge	2	Landfall/ HDD works		120

Vessel Type	Anticipated Total Number	Key Construction Activities	Commentary	Indicative Total Number of Days
		Cable pull-through		
Guard vessel	20	Guard	Up to 20, but likely much less on account of phased works	3500
Survey vessel	2	e.g. Boulder clearance	2 survey vessels in total	90
Small tug	1	Pre-lay grapnel run	Included in the 20 'Guard vessel' numbers above, as will be complete ahead of any lay/ protection	51

Operation and Maintenance Vessels

- 1.5.9 The number of vessels required during the operation and maintenance phase at any one time will vary, with peaks in vessel activity reflecting the timing of major maintenance works.
- 1.5.10 Post installation cable inspection surveys would be undertaken using a single survey vessel, equipped with an ROV and geophysical survey equipment, and are expected to take up to 30 days. Cable inspection surveys would be carried out under the following survey schedule:
- Routine surveys of the offshore submarine cables shall commence two years from the commissioning of the first Bipole.
 - If no issues are found, the next follow up survey would be in three years, with the interval increasing by one year each time, until the period between surveys reaches five years.
 - If no issues are found, routine surveying through the remainder of the operational phase is likely to be conducted on a five-year basis.
 - If an issue is found, it will be flagged for further investigation, and mobilisation of repair as appropriate.
- 1.5.11 Major maintenance works are not planned, but may be required in the event of cable failure. The types of vessels required and indicative durations required in the event of cable failure are shown in **Table 1.3**.

Table 1.3 Cable Fault/Repair Vessel Activities Summary

Vessel Type	Durations (Days)						
	Fault Location	Repair Contractor Call Out	Cable Location and Deburial	Cable Repair	Burial	Rock Protection (if required)	Total
Survey Vessel	5	0	0	0	0	0	5
Guard Vessel	0	30	10	20	5	5	70
Trenching Support Vessel	0	0	10	0	5	0	15
Cable Lay Vessel	0	0	0	20	0	0	20
Rock Protection Vessel	0	0	0	0	0	5	5

1.5.12 The following assumptions have been made to inform the above durations:

- Vessels are readily available;
- Work is planned so that activities can follow sequentially with no delay. Any delays will extend the use of guard vessels;
- Guard vessel is required once fault location is known, for example, where cables are exposed by external damage; and
- Repair is beyond the nearshore area. Repairs in shallow water may require the use of a jack-up barge and barge, replacing the trenching support vessel and cable-lay vessel.

1.6 Environmental Sensitivities Relevant to Vessel Management

Vessel Operation Guidelines and Safety Awareness for Marine Wildlife

1.6.1 In the marine environment, operators of vessels should be informed about the potential threat their vessels may pose to marine wildlife (including birds, marine mammals and sea turtles). Guidance on collision awareness and avoidance protocols must be communicated to vessel crews during mobilisation briefings.

1.6.2 As a general guide, the following Vessel Code of Conduct should be implemented, to mitigate risks:

- Restrict vessel movements to existing navigation routes where feasible (during transit to the Proposed Development) as animals are accustomed to vessels in those areas thereby reducing collision risks;
- Where it is necessary to go outside of established navigational routes, avoid rafting birds and where possible avoid disturbance to areas with consistently high numbers of birds;

- Avoid active and deliberate approaches or pursuits of animals when sighted;
- Refrain from touching animals;
- When animals are alongside vessels or bow-ride, maintain a steady speed and avoid course changes;
- Minimise over-revving of engines to reduce noise disturbance;
- Maintain a steady speed and direction to allow animals to predict the vessel's path;
- Vessel operators should adhere to the guidance outlined in the WiSe Scheme (i.e. stay 100 m away from animals, avoid groups of mothers and young);
- Transit vessels at distances of 600 metres (m) or more off the coast, where possible, particularly near known seal haul-out sites during sensitive periods;
- Report details of any collision between a vessel and animals to the principal contractor; and
- Conduct briefings for vessel crew on the purpose and implications of these vessel management practices, such as through toolbox talks.

- 1.6.3 These recommendations are applicable unless they pose a risk to the safety of the vessel, crew, and other sea users. Safety is the foremost priority in all cases.
- 1.6.4 Vessel crew should be briefed on the purpose and implications of these vessel management practices (through, for example, tool-box talks).
- 1.6.5 In addition, any sightings of turtles should be recorded and reported to the principal contractor, noting the location and if possible behaviour and description of the animal.

1.7 Compliance with MGN 654 and the Application

- 1.7.1 It is expected that a condition of consent will require the Applicant to demonstrate that the finalised NSVMP has adequately addressed all of the recommendations of the current MGN 654 (MCA, 2021), and its annexes that may be appropriate to the Proposed Development, or any other relevant document which may supersede said guidance prior to approval of the final NSVMP. This outline NSVMP has considered all assessments carried out at the time of the application for Development Consent and addresses all relevant recommendations of the current MGN 654, specifically those in Section 4.14 of the MGN 654 checklist, noting there may be some aspects of the checklist that are not relevant to cables.
- 1.7.2 Furthermore, the finalised NSVMP will be confirmed prior to the commencement of construction activities, and will be required to demonstrate compliance with any conditions of consent, and with any relevant commitments and aspects of the ES and related plans prepared as part of the application. This includes any conditions of consent that arise as part of the application process.