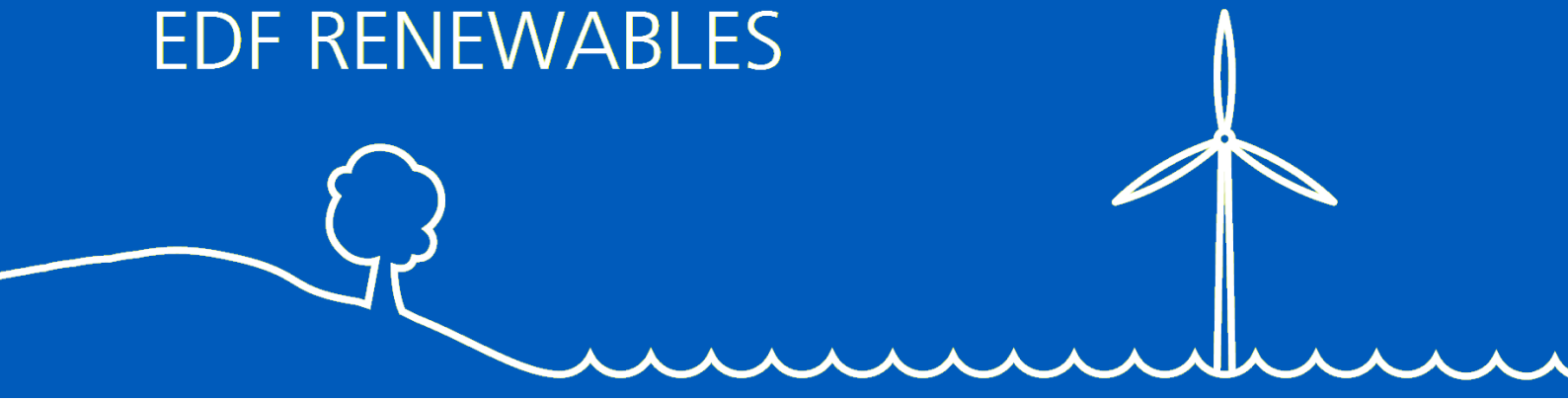
EDF RENEWABLES



Neart na Gaoithe Offshore Wind Farm

Generating Station Navigational Safety and Vessel Management Plan

Revision 4.0

December 2025

DOCUMENT REFERENCE: NNG-NNG-ECF-PLN-0010

NnG OFFSHORE WIND

EDF renewables

Neart na Gaoithe Offshore Wind Farm

Navigational Safety and Vessel Management Plan

Pursuant to Section 36 Consent Condition 17 in respect of the Navigational Safety Plan and Section 36 Consent Conditions 15 and Marine Licence (Generating Station) Condition 3.2.2.12 in respect of the Vessel Management Plan

For the approval of the Scottish Ministers

Document Control

SIGN OFF		
Name (Role)	Signature	Date
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Steven Rayner Offshore Environment Manager	S. Rayner	05/01/2026
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Overview

Purpose and Objectives of the Plan

This Navigational Safety and Vessel Management Plan (NSVMP) has been prepared to address the specific requirements of the relevant conditions attached to the Section 36 (S36) consent and Generating Station Marine Licence (collectively referred to as the Offshore Consents) issued to Neart na Gaoithe Offshore Windfarm Limited (NnGOWL). These conditions require the documentation of a Navigational Safety Plan (NSP) and Vessel Management Plan (VMP). These plans have been combined into a single document (the NSVMP) given the overlap between the two, noting that this approach has been agreed with the Scottish Ministers.

In line with the sale of the offshore transmission infrastructure (OFTI), this plan has been updated to detail the navigational safety measures that will be put in place by NnGOWL (including vessel management procedures) to minimise any risks from the Wind Farm to mariners.

The offshore transmission infrastructure (OfTI), namely the two Offshore Substations Platforms (OSPs), OSP foundations and export cables, will be divested to the Offshore Transmission Operator (OFTO). To facilitate the divestment, a separate OFTI NSPVMP has been prepared for the OFTI assets.

All NnGOWL personnel and Contractors involved in the Wind Farm must comply with this NSVMP.

Scope of the Plan

The NSVMP covers, in line with the requirements of the consents conditions, and in line with industry standards and good practice, the following:

- Navigational safety measures during construction: Temporary lighting and marking; buoyage; safety zones; management of the construction area; recommended routes and entry/exit gates; and, vessel safety requirements.
- Navigational safety measures during operation: Marine coordination; safety zones; management of operations and maintenance activities; recommended routes and entry/exit gates; and, vessel safety requirements.
- Details of anchoring areas.
- Notifications to stakeholders and marine users.
- Emergency response.
- Project vessel specifications.
- Vessel management procedures.
- Details of working ports.

Structure of the Plan

The NSVMP is structured as follows:

Sections 1 to 3 sets out the scope and objectives of the NSVMP, details the process for making updates and amendments to this document, sets out broad statements of compliance and provides an overview of the Project.

Sections 4 and 5 present the navigational safety measures to be adopted during the construction and Operation and Maintenance (O&M) phases including lighting and marking, buoyage, safety zones, cable laying operations and recommended entry/exit route gates.

Sections 6 and 7 detail the promulgation of information through Notice to Mariners (NtM)s and other notifications as well as details of what is to be included within the Emergency Response Cooperation Plan (ERCoP).

Sections 8 to 12 present the locations of working ports, the management and coordination of vessels, types, specifications, numbers and movements of vessels and indicative transit routes for vessel associated with the Project.

Section 13 describes the areas recommended for anchoring and areas where anchoring should be avoided.

Sections 14 and Appendix A confirms compliance of the NSVMP with the Application.

Plan Audience

The NSVMP is intended to be referred to by personnel involved in the construction of the Wind Farm, including NnGOWL personnel and Contractors. The NSVMP will be issued to the Fisheries Liaison Officer (FLO) for information.

Compliance with this NSVMP will be monitored by the NnG Control Room, the NnGOWL Consents team, , and reported to the Marine Directorate Licensing Operations Team (MD-LOT).

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Acronyms and Abbreviations

TERM	DESCRIPTION
AC	Alternating Current
AIS	Automatic Identification System
AtoN	Aids to Navigation
CAA	Civil Aviation Authority
CGOC	Coast Guard Operation Centre
CLV	Cable Lay Vessel
COLREGS	International Regulations for Preventing Collisions at Sea
CTV	Crew Transfer Vessel
DGC	Defence Geographic Centre
DIO	Defence Infrastructure Organisation
ECoW	Environmental Clerk of Works
FP	Forth Ports
HLV	Heavy Lift Vessel
HMCG	HM Coastguard
HTV	Heavy Transport Vessel
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
IHO	International Hydrographic Organization
IMCA	International Marine Contractor Audit
IMO	International Maritime Organisation
JUV	Jack-up Vessel
KIS-ORCA	Kingfisher Information Service – Offshore Renewable & Cable Awareness
LNtMs	Local Notice to Mariners
MCA	Maritime and Coastguard Agency
MCC	Marine Coordination Centre

TERM	DESCRIPTION
MF	Medium Frequency
MGN	Marine Guidance Note
MD-LOT	Marine Directorate Licensing and Operations Team
MW	Megawatt
NAVAREA	Navigational Area
NLB	Northern Lighthouse Board
NOTAM	Notice to Airmen
NSP	Navigational Safety Plan
NtM	Notice to Mariners
O&M	Operation and Maintenance
OCV	Offshore Construction Vessel
OfCom	Office of Communications
OfTI	Offshore Transmission Infrastructure
OfTW	Offshore Transmission Works
OREI	Offshore Renewable Energy Installation
OSP	Offshore Substation Platform
PSV	Platform Supply Vessel
RAM	Restricted in Ability to Manoeuvre
SAR	Search and Rescue
SFF	Scottish Fishermen's Federation
SNH	Scottish Natural Heritage
SOLAS	Safety of Life at Sea
SOV	Service Operation Vessel
SSCV	Semi-submersible Crane Vessel
STCW	Standards for Training, Certification and Watch Keeping

TERM	DESCRIPTION
T&P	Temporary and Preliminary
UKHO	United Kingdom Hydrographic Office
VHF	Very High Frequency
VMP	Vessel Management Plan
WDC	Whale and Dolphin Conservation
WWNWS	Worldwide Navigational Warning Service
WZ	UK Coastal Navigational Warning

Defined Terms

TERM	DESCRIPTION
Addendum	The Addendum of Additional Information submitted to the Scottish Ministers by NnGOWL on 26 July 2018.
Application	The Environmental Impact Assessment Report, Habitats Regulations Appraisal Report submitted to the Scottish Ministers by NnGOWL on 16 March 2018; the Addendum of Additional Information submitted to the Scottish Ministers by NnGOWL on 26 July 2018 and the Section 36 Consent Variation Report dated 08 January 2019.
Company	Neart na Gaoithe Offshore Wind Limited (NnGOWL) (Company Number SC356223). NnGOWL has been established to develop, finance, construct, operate, maintain and decommission the Project.
Consent Conditions	The terms that are imposed on the Company under the Offshore Consents that must be complied with
Consent Plans	The plans, programmes or strategies required to be approved by the Scottish Ministers (in consultation with appropriate stakeholders) in order to discharge the Consent Conditions.
Contractors	Any Contractor/Supplier (individual or firm) working on the Project.
EIA Report	The Environmental Impact Assessment Report, dated March 2018, submitted to the Scottish Ministers by NnGOWL as part of the Application.
Generating Station Infrastructure	The offshore array as assessed in the Application including wind turbines, their foundations, inter-array cabling and offshore interconnector cables connecting the OSPs to one another.
Inter-array Cables	The offshore cables connecting the wind turbines to one another and to the OSPs.
Interconnector Cables	The offshore cables connecting the OSPs to one another.

TERM	DESCRIPTION
Marine Licences	The written consents granted by the Scottish Ministers under the Marine (Scotland) Act 2010, for construction works and deposits of substances or objects in the Scottish Marine Area in relation to the Wind Farm (Licence Number MS-00011510) and the OfTW (Licence Number MS-00011509), both dated 15 December 2025.
Offshore Consents	The Section 36 Consent and the Generating Station Marine Licence.
Offshore Export Cable Corridor	The area within which the offshore export cables are to be located.
Offshore Export Cables	The offshore export cables connecting the OSPs to the landfall site.
OfTI	The Offshore Transmission Infrastructure comprising the OSPs and offshore export cables required to connect the Wind Farm to the Onshore Transmission Works at the landfall.
OfTW	The Offshore Transmission Works comprising the OSPs, offshore interconnector cables and offshore export cables required to connect the Wind Farm to the Onshore Transmission Works at the landfall.
OfTW Area	The area outlined in red and blue in Figure 1 attached to Part 4 of the OfTW Marine Licence.
OnTW	The onshore transmission works from landfall and above Mean High Water Springs, consisting of onshore export cables and the onshore substation.
Project	The Wind Farm and the OfTW.
Section 36 Consent	The written consent granted on 3 December 2018 by the Scottish Ministers under Section 36 of The Electricity Act 1989 to construct and operate the Wind Farm, as varied by the Scottish Ministers under section 36C of the Electricity Act 1989 on 4 June 2019.
Section 36 Consent Variation Report	The Section 36 Consent Variation Report submitted to the Scottish Ministers by NnGOWL as part of the Application as defined above on 08 January 2019.
Subcontractors	Any Contractor/Supplier (individual or firm) providing services to the Project, hired by the Contractors (not NnGOWL).
Wind Farm	The offshore array as assessed in the Application including wind turbines, their foundations and inter-array cabling.
Wind Farm Area	The area outlined in black in Figure 1 attached to the Section 36 Consent Annex 1, and the area outlined in red in Figure 1 attached to Part 4 of the Wind Farm Marine Licence.

Consent Plans

CONSENT PLAN	ABBREVIATION	DOCUMENT REFERENCE NUMBER
Decommissioning Programme	DP	NNG-NNG-ECF-PLN-0016

CONSENT PLAN	ABBREVIATION	DOCUMENT REFERENCE NUMBER
Construction Programme and Construction Method Statement	CoP & CMS	NNG-NNG-ECF-PLN-0002
Piling Strategy	PS	NNG-NNG-ECF-PLN-0011
Development Specification and Layout Plan	DSLP	NNG-NNG-ECF-PLN-0003
Design Statement	DS	NNG-NNG-ECF-PLN-0004
Environmental Management Plan	EMP	NNG-NNG-ECF-PLN-0006
Operation and Maintenance Programme	OMP	NNG-NNG-ECF-PLN-0012
Navigational Safety and Vessel Management Plan	NSVMP	NNG-NNG-ECF-PLN-0010
Construction Phase Emergency Response Cooperation Plan	Construction Phase ERCoP	NNG-NNG-ECF-PLN-0015
Operations Phase Emergency Response Cooperation Plan	Operations Phase ERCoP	NNG-NNG-ECF-PLN-0022
Cable Plan	CaP	NNG-NNG-ECF-PLN-0007
Lighting and Marking Plan	LMP	NNG-NNG-ECF-PLN-0009
Project Environmental Monitoring Programme	PEMP	NNG-NNG-ECF-PLN-0013
Fisheries Management and Mitigation Strategy	FMMS	NNG-NNG-ECF-PLN-0008
Offshore Written Scheme of Investigation and Protocol for Archaeological Discoveries	WSI & PAD	NNG-NNG-ECF-PLN-0005
Construction Traffic Management Plan	CTMP	NNG-NNG-ECF-PLN-0014

1 Introduction

1.1 Background

1. The Neart na Gaoithe Offshore Wind Farm (Revised Design) received consent under Section 36 of the Electricity Act 1989 from the Scottish Ministers on 03 December 2018 and was granted a Generating Station Marine Licence by the Scottish Ministers, for the Wind Farm on 03 December 2018. The S36 consent and Wind Farm Marine Licence were revised by issue of a variation to the S36 Consent and Marine Licence 06677/19/0 on 4 June 2019. The Marine Licence was furthered varied by issue of MS-00011510 on 15 December 2025.
2. The Project has been developed by Neart na Gaoithe Offshore Wind Limited (NnGOWL) which is owned by EDF Power Solutions UK and Ireland (referred to as EDF throughout the remainder of this document).

1.2 Objectives of this Document

3. The Offshore Consents contain a variety of conditions that must be discharged through approval by the Scottish Ministers prior to the commencement of any offshore construction works. One such requirement is the approval of a Navigational Safety Plan (NSP) and Vessel Management Plan (VMP), the purpose of which is to provide the details of the vessel management and navigational safety of Project, in accordance with relevant guidance, during construction and operation. The relevant conditions setting out the requirement for an NSP and VMP for approval, and which are to be discharged by this combined NSP and VMP document (NSVMP), are presented in full in Table 1-1. The submission of the NSP and VMP as a single document has been agreed with the Scottish Ministers.
4. In addition to the specific consent requirements for an NSP and VMP and the requirements thereof (as set out in Table 1-1), this NSVMP also includes information in respect of a number of other consents conditions which are linked to the matter of navigational safety and lighting and marking. These are set out in Table 1-2 with reference to where matters are addressed in this NSVMP included.
5. A separate OfTI NSVMP has been prepared for the Offshore Transmission Infrastructure assets, namely two Offshore Substations Platforms (OSPs) and export cables.

Table 1-1 : NSP and VMP consent conditions to be discharged by this Consent Plan

OFFSHORE CONSENTS REFERENCE	CONDITION	WHERE ADDRESSED
Section 36 Consent Condition 17	The Company must, no later than six months prior to the Commencement of the Development, submit a NSP, in writing, to the Scottish Ministers for their written approval.	This NSVMP will be submitted to the Scottish Ministers at least six months prior to the Commencement of the Development.
	Such approval may only be granted following consultation by the Scottish Ministers with Maritime and Coastguard Agency (MCA), Northern Lighthouse Board (NLB) and any other navigational advisors or organisations as may be required at the discretion of the Scottish Ministers.	Consultation to be undertaken by the Scottish Ministers.

OFFSHORE CONSENTS REFERENCE	CONDITION	WHERE ADDRESSED
	The NSP must include, but not be limited to, the following issues: a) Navigational safety measures; b) Construction exclusion zones; c) Notice(s) to mariners and radio navigation warnings; d) Anchoring areas; e) Temporary construction lighting and marking; f) Buoyage.	a) Section 4 (construction) and Section 5 (operation) b) Section 4.3 c) Section 6 d) Section 13 e) Section 4.2 f) Section 4.2 (construction) and Section 5.2 (operation)
	The Company must confirm within the NSP that they have taken into account and adequately addressed all of the recommendations of the MCA in the current Marine Guidance Note 543 ("MGN 543"), and its annexes that may be appropriate to the Development, or any other relevant document which may supersede this guidance prior to approval of the NSP.	This NSVMP has been written in compliance with MGN 543 as per Section 2
Section 36 Consent Condition 15	The Company must, no later than six months prior to the Commencement of the Development, submit a VMP, in writing, to the Scottish Ministers for their written approval.	This NSVMP will be submitted to the Scottish Ministers at least six months prior to the Commencement of the Development.
	Such approval may only be granted following consultation by the Scottish Ministers with Scottish Natural Heritage (SNH), Whale and Dolphin Conservation (WDC), Forth Ports (FP), MCA [Maritime and Coastguard Agency], NLB [Northern Lighthouse Board], Scottish Fishermen's Federation (SFF) and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.	Consultation to be undertaken by the Scottish Ministers.
	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, how often vessels will be required to transit between port(s) and the site and indicative vessel transit corridors proposed to be used during construction and operation of the Development.	a) Sections 10 and 11 b) Section 4 c) Section 8 (ports), Section 4 (movements), and Section 12 (transit routes)

OFFSHORE CONSENTS REFERENCE	CONDITION	WHERE ADDRESSED
	The confirmed individual vessel details must be notified to the Scottish Ministers in writing no later than 14 days prior to the Commencement of the Development, and thereafter, any changes to the details supplied must be notified to the Scottish Ministers, as soon as practicable, prior to any such change being implemented in the construction or operation of the Development.	As per Section 10, final vessel details will be submitted to the Scottish Ministers at least 14 days prior to Commencement of Development, with notification of any changes provided as soon as is practicable.
	The VMP must, so far as is reasonably practicable, be consistent with the Construction Method Statement (CMS), the Environmental Management Plan (EMP), the Project Environmental Monitoring Programme (PEMP), the NSP, and the Lighting and Marking Plan (LMP).	Section 1.3.
Wind Farm Marine Licence Condition 3.2.2.12	The Licensee must, no later than six months prior to the Commencement of the Works, submit a VMP, in writing, to the Licensing Authority for its written approval.	This document sets out the VMP for approval by the Scottish Ministers.
	Such approval may only be granted following consultation by the Licensing Authority with SNH, WDC, FP, MCA, NLB, SFF and any such other advisors or organisations as may be required at the discretion of the Licensing Authority. Commencement of the Works may not take place until such approval is granted.	Consultation to be undertaken by Scottish Ministers.
	The VMP must include, but not be limited to, the following details: a. The number, types and specification of vessels required; b. The manner in which 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 and indicative vessel transit corridors proposed to be used during construction and operation of the Works.	a. Section 10 and 0 b. Section 4.4 c. Section 8 (ports), Section 4 (movements), and Section 12 (transit routes)
	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 Works, 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 or operation of the Works.	Section 10
	The VMP must, so far as is reasonably practicable, be consistent with the CMS, the EMP, the PEMP, the NSP, and an LMP.	Section 1.3

Table 1-2 : Other consent conditions relevant to this Consent Plan

OFFSHORE CONSENTS REFERENCE	CONDITION	WHERE ADDRESSED
Wind Farm Marine Licence Condition 3.2.2.2	The Licensee must, prior to the Commencement of the Works, provide the positions and maximum heights of any WTG and construction equipment to the United Kingdom Hydrographic Office ("UKHO"), for nautical charting purposes, and to the Defence Geographic Centre ("DGC"), for aviation purposes.	Section 6 (Promulgation of Information)
Wind Farm Marine Licence Condition 3.2.2.5	**Navigation and Charting** The Licensee must, no later than one calendar month prior to Commencement of the Works, notify the UKHO of the proposed works to facilitate the promulgation of maritime safety information and updating of admiralty charts and publications through the national Notice to Mariners system. The Licensee must, no later than one calendar month prior to Commencement of the Works, ensure that local mariner's organisations and local fishermen's organisations and HM Coastguard are made fully aware of the Works through local Notice to Mariners or by any other appropriate means. The Licensee must ensure that details of the Licensed Activities are promulgated in the Kingfisher Fortnightly Bulletin, no later than one calendar month prior to the Commencement of the Works to inform the commercial fishing industry of the vessel routes and the timing and location of the construction activities. The Licensee must, no later than eight weeks prior to the Commencement of the Works, complete an "Application for Statutory Sanction to Alter/Exhibit" form and submit this to the Northern Lighthouse Board ("NLB") for the necessary sanction to be granted.	Section 6 (Promulgation of Information) Section 4 (Statutory Sanction)
Wind Farm Marine Licence Condition 3.2.3.2	**Navigational Safety** The Licensee must notify the UKHO of the progress of the construction of the Works to facilitate the promulgation of maritime safety information and updating of admiralty charts and publications through the national Notice to Mariners (NtMs) system. The Licensee must ensure that the progress of the Works is promulgated regularly in the Kingfisher Fortnightly Bulletin to inform the commercial fishing industry of the vessel routes and the timing and location of the construction activities. The Licensee must in the case of damage to, or destruction or decay of the Works, notify the Licensing Authority, in writing, as soon as reasonably practicable, following such damage, destruction or decay. The Licensee must carry out any remedial action as required by the Licensing Authority, following consultation with the MCA the NLB or any such advisers as required by the Licensing Authority. The Licensee must ensure that any vessels permitted to engage in the construction of the Works are marked in accordance with the International Rules for the Prevention of Collisions at Sea whilst under way, and in accordance with the UK Standard Marking Schedule for Offshore Installations if the vessel is secured to the seabed. The Licensee must ensure that no radio beacon or radar beacon operating in the marine frequency bands is installed or used on the Works without the prior written approval of the Office of Communications ("OfCom").	Section 6 (Promulgation of Information) Section 4.6 and section 5.8 (Injury, Destruction or Decay) Section 4.5.1 (Cable Laying and other Restricted in Ability to Manoeuvre (RAM) Operations) Section 6.7 (Radio Navigational Warnings) Section 5.6 (Subsea Cable Inspections)

OFFSHORE CONSENTS REFERENCE	CONDITION	WHERE ADDRESSED
	The Licensee must ensure that navigable depth is not altered by more than 5% referenced to chart datum unless otherwise agreed, in writing, with the Licensing Authority in consultation with the MCA and NLB.	
Wind Farm Marine Licence Condition 3.2.4.4	**Navigational Safety** The Licensee must notify the UKHO of the completion of the Works to facilitate the promulgation of maritime safety information and updating of Admiralty Charts and publications through the national Notice to Mariners system. The Licensee must, within one month of the Completion of the Works, provide the "as-built" positions and maximum heights of allWTG along with any sub-sea infrastructure, to the Defence Geographic Centre and the UKHO for aviation and nautical charting purposes. The Licensee must, as per the requirements of the MCA's MGN 543 and any appropriate updates, complete post-installation hydrographic surveys of the Site or subsections thereof, to the International Hydrographic Organization (IHO) Order 1a survey standard. On completion of all these surveys the data and corresponding report of survey must be supplied to the UKHO, with notification to the MCA hydrography manager and the Licensing Authority. The Licensee must ensure that local mariners, fishermen's organisations and HM Coastguard, in this case the National Maritime Coastguard Centre are made fully aware of the Completion of the Works. The Licensee must ensure that the Completion of the Works is promulgated in the Kingfisher Fortnightly Bulletin to inform the commercial fishing industry. The Licensee must, where any damage, destruction or decay is caused to the Works, notify the Licensing Authority, in writing, of such damage, destruction or decay as soon as reasonably practicable following such damage, destruction or decay. The Licensee must carry out any remedial action which the Licensing Authority advises the Licensee, in writing, as requiring to be taken, which may include a requirement to display aids to navigation, following consultation by the Licensing Authority with the MCA, the NLB or any such advisers as required. The Licensee must ensure that the WTG are actively monitored during the operation and maintenance phases. The Licensee must ensure that a contingency plan is in place to respond to any reported catastrophic failures which may result in the WTG, or part(s) thereof, breaking loose and becoming a buoyant hazard. This contingency plan should include the transmission of local radio navigation warnings. The Licensee must ensure that no radio beacon or radar beacon operating in the marine frequency bands is installed or used on the Works without the prior written approval of OfCom. The Licensee must not exhibit, alter or discontinue navigational lighting of the Works without the statutory sanction of the Commissioners of Northern Lighthouses. An 'Application for Statutory Sanction to Exhibit/Discontinue' form must be completed by the Licensee as fully as possible and returned to the NLB for the necessary sanction to be granted prior to exhibiting, altering or discontinuing navigational lighting.	Section 6 (Promulgation of Information) Section 4 (Statutory Sanction) Section 5.7 (Hydrographic Surveys) Section 4.6 and section 5.8 (Injury, Destruction or Decay) Section 5.4 (Management of Operation and Maintenance Activities)

OFFSHORE CONSENTS REFERENCE	CONDITION	WHERE ADDRESSED
Wind Farm Marine Licence Condition 3.2.4.8	**Charting requirements** The Licensee must, within one month of the final Completion of the Works, provide the coordinates accurate to three decimal places of minutes of arc for each WTG, position and maximum heights of the WTG to UKHO and the DGC for nautical charting and aviation purposes.	Section 6 (Promulgation of Information)

1.3 Linkages with other Consent Plans

6. This NSVMP document sets out the vessel management measures and proposed navigational safety measures for the Wind Farm. It forms part of a suite of approved documents that provide the framework for environmental management of the Wind Farm – namely the other Consent Plans required under the consents.

7. The linkages between this NSVMP and other Consent Plans is summarised in Table 1-3.

Table 1-3: NSVMP linkages with other Consent Plans (and consents conditions)

OFFSHORE CONSENT REFERENCE	CONSENT PLAN	LINKAGE WITH NSVMP
Section 36 Consent Condition 10 **Wind Farm Marine Licence Condition 3.2.2.8**	**Construction Method Statement (CMS)**	The purpose of the CMS is to detail the methods that will be implemented during the construction phase. The CMS is, so far as is reasonably practicable, consistent with the NSVMP as required under the relevant conditions.
Section 36 Consent Condition 14 **Wind Farm Marine Licence Condition 3.2.2.11**	**Environmental Management Plan (EMP)**	The EMP sets out the environmental management framework for the construction and operation of the Project. The vessel activity and vessel management described in the NSVMP will be undertaken in line with the environmental management measures described in the EMP.
Section 36 Consent Condition 23	**Project Environmental Monitoring Programme (PEMP)**	The PEMP provides an overview of the programme developed to monitor the environmental effects of the Project.
Section 36 Consent Condition 20 **Wind Farm Marine Licence Consent Condition 3.2.3.3 and 3.2.4.5**	**Lighting and Marking Plan (LMP)**	Provides details of lighting and marking of the Wind Farm during construction and operation. The NSVMP will be implemented in accordance with the approved LMP.
Section 36 Consent Condition 16 Wind Farm Marine Licence Consent Condition 3.2.4.6	**Operation and Maintenance Programme (OMP)**	The OMP sets out the procedures and good working practices for the operation and maintenance phase of the Wind Farm. The OMP must, so far as is reasonably practicable, be consistent with the NSVMP.

1.4 NSVMP Document Structure

8. An overview of the structure of this NSVMP is provided below.

Table 1-4 : NSVMP document structure

SECTION	TITLE	SUMMARY OF CONTENT
1	Introduction	Background to consent requirements and overview of the NSVMP scope and structure; and Identifies those other Consent Plans with linkages to the NSVMP.
2	NnGOWL Statements of Compliance	Sets out the NnGOWL statements of compliance in relation to the NSVMP.
3	Project Overview	Provides an overview of the Project.
4	Navigational Safety Measures during Construction	Sets out the navigational safety measures to be adopted during the construction phase including: lighting and marking, buoyage, safety zones, management of the construction area and safety zones, cable laying and other RAM operations and recommended entry/exit route gates.
5	Navigational Safety Measures during Operation and Maintenance	Sets out the navigational safety measures to be adopted during the Operation and Maintenance (O&M) phase including: lighting and marking, marine coordination, safety zones, RAM operations, subsea cable inspections and recommended entry/exit route gates.
6	Promulgation of Information	Sets out the NtMs and other notifications to be promulgated at various stages of the Project (prior to, during and following construction and operation).
7	Emergency Response	Sets out details of what will be included in the Emergency Response Cooperation Plan (ERCoP) and references the marine incident reporting process which will be detailed in the emergency response plan.
8	Location of Working Ports	Describes the potential location and specifications of the construction ports.
9	Management and Coordination of Vessels	Summarises the process for the management and coordination of vessels during the construction and O&M phases of the Wind Farm.
10	Types and Specifications of Vessels	Describes the types of vessels that will be used during the construction and O&M phases of the Wind Farm.
11	Numbers and Movements of Vessels	Describes the numbers of vessels during the construction and O&M phases of the Project and the anticipated movements between the Wind Farm Area and ports.
12	Indicative Transit Routes	Sets out the indicative vessel transit routes that may be used during the construction and O&M phases of the Wind Farm.
13	Anchoring Areas	Describes the areas recommended by Admiralty Sailing Directions and Admiralty Charts for anchoring, and areas which should be avoided.

SECTION	TITLE	SUMMARY OF CONTENT
14	Compliance with the Application	Confirms that the details set out in this NSVMP are in accordance with those assessed in the EIA Report.
Appendix A	Compliance with the Application	Provides full details as to how the NSVMP is compliant with the Application.

2 NnGOWL Statements of Compliance

9. NnGOWL (including NnGOWL's relevant Contractors/Subcontractors) in undertaking the construction and operation of the Wind Farm will comply with this NSVMP as approved by Scottish Ministers.

10. Where updates or amendments to this NSVMP are required, NnGOWL will ensure the Scottish Ministers are informed as soon as reasonably practicable and where necessary the NSVMP will resubmitted for approval.

11. NnGOWL will comply with the limits defined by the Application and supporting documentation (referred to in Annex 1 of the S36 Consent in so far as they apply to this NSVMP (unless otherwise approved in advance by the Scottish Ministers)).

12. NnGOWL (including NnGOWL's relevant Contractors/Subcontractors) will comply with the requirements of relevant environmental, health and safety, and maritime legislation as standard. NnGOWL have prepared this NSVMP in line with the requirements of Marine Guidance Note (MGN) 543 (Maritime and Coastguard Agency (MCA), 2016) and its annexes, as required under S36 Consent Condition 17.

3 Project Overview

13. The Wind Farm Area is located to the northeast of the Firth of Forth, 15.5 km directly east of Fife Ness on the east coast of Scotland (see Figure 3-1). The Wind Farm Area covers approximately 105 km^2. Offshore Export Cables will be located within the 300 m wide Offshore Export Cable Corridor, running in an approximately southwest direction from the Wind Farm Area, making landfall at Thorntonloch beach to the south of Torness Power Station in East Lothian. Figure 3-1 shows the Wind Farm Area and Offshore Export Cable Corridor.

14. The components that make up the Wind Farm, and covered by this NSVMP, are:

- 54 wind turbines generating a confirmed total output of around 450 Megawatts (MW);
- 54 jacket substructures installed on pre-piled foundations, to support the wind turbines;
- A network of inter-array subsea cables, buried and/or mechanically protected, to connect strings of turbines together and to connect the turbines to the OSPs;
- One interconnector cable connecting the OSPs to each other;

15. Offshore construction commenced in August 2020 and is expected to be completed by March 2026. Details of the construction programme are provided in the Construction Programme and Construction Method Statement (CoP & CMS).

16. A separate NSVMP has been prepared for the OfTI assets.

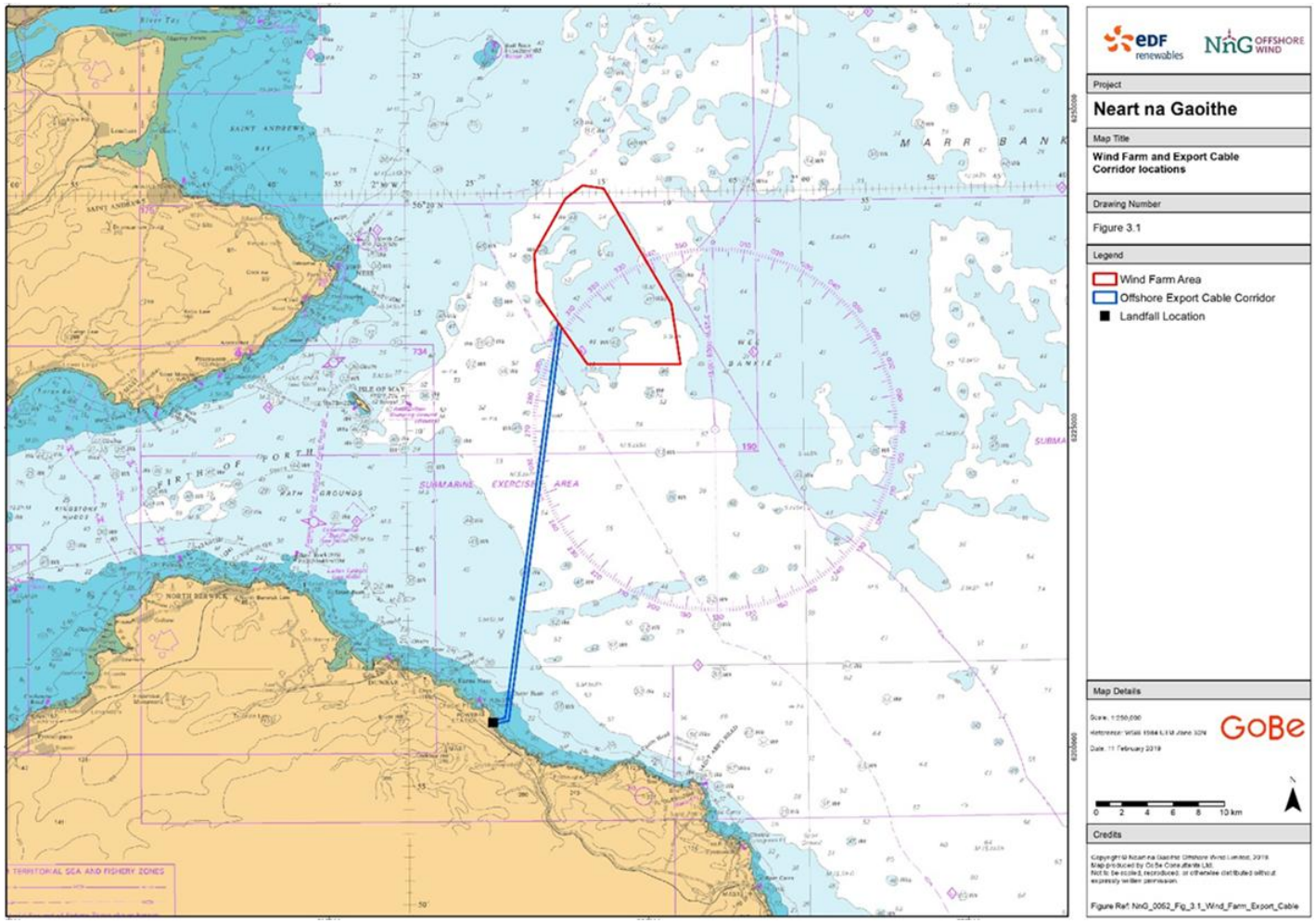

Figure 3-1: Wind Farm Area and Offshore Export Cable Corridor Location

4 Navigational Safety Measures during Construction

4.1 Introduction

17. This section sets out the navigational safety measures that NnGOWL will implement during the construction of the Wind Farm, specifically detailing the conditions required by the consent.

4.2 Temporary Lighting and Marking

18. Marine and aviation marking, including lights, visual marks and construction buoyage will be provided in accordance with Northern Lighthouse Board (NLB), Civil Aviation Authority (CAA), MCA and the Defence Infrastructure Organisation (DIO) requirements. This information is detailed within the LMP. During construction, the Wind Farm shall be marked and lit as required by NLB (and as set out in the LMP) and continued as such unless and until the Licensing Authority rescind this direction.

19. Prior to commencing construction of the Project, NnGOWL completed an "Application for Statutory Sanction to Alter/Exhibit" form and submitted this to NLB for the necessary sanction to be granted.

4.3 Construction Safety Zones

20. A safety zone is a scheme set out in the Energy Act 2004 and the Electricity Regulations 2007. It applies to territorial waters in or adjacent to Scotland and within the Renewable Energy Zone. It allows a Safety Zone of up to 500 m (defined by the United Nations Convention for Law of the Sea) to be established around a fixed object in order to control vessel movements within proximity to a navigational hazard. Safety zones prohibit third party marine users from entering within 500m of the activity being carried out due to navigational safety risk, apart from during emergency incidents.

21. Prior to construction, NnGOWL applied to Marine Scotland[1] for the use of 500m safety zones around structures where construction activities are ongoing (as denoted by the presence of a construction vessel at that structure), and 50m safety zones around any structure where construction is not ongoing up until the point of commissioning of the wind farm. This application will be in accordance with The Electricity (Offshore Generating Stations) (Safety Zones) (Application Procedures and Control of Access) Regulations 2007. The application was accompanied by a layout plan, construction programme and include proposals for notifying relevant stakeholders.

22. The Safety Zones are "rolling", i.e. they follow the construction vessels from one location to the next and are based around the construction activity. Construction activities for which a Safety Zone would be applied for include but are not limited to:

- Installation of foundation;
- Erection of turbine on the foundation;
- Installation of substation topsides;
- Inter-array cable connection at turbine foundation;
- Inter-array cable connection at substation foundation; and
- Export cable connection at substation foundation.

[1] Responsibilities associated with safety zone applications were transferred from BEIS to Marine Scotland, as of the 1st April, 2017.

23. Construction safety zones shall be monitored for infringements. Marine Directorate will be notified of any incidents of a vessel repeatedly infringing the safety zones, or any isolated incidents considered as representing dangerous behaviour. Any such notification would be accompanied by supporting evidence of the infringement. This evidence will be gathered using on site radar and Automatic Identification System (AIS) monitoring, or other supporting evidence provided by on-site vessels.

4.4 Management of the Construction Area (including Safety Zones)

24. The following sub-sections describe how the construction activities within the Wind Farm will be managed from a navigational safety perspective.

4.4.1 NnG Control Room

25. Permission for construction vessels to enter the construction area and safety zones shall be managed by the NnG Control Room using a Permit to Work system.

26. The NnG Control Room will establish protocols for approaching and leaving the worksite as well as management systems to record the work being undertaken and the vessels and personnel undertaking that work.

27. The NnG Control Room shall ensure the safety of the site using appropriate methods such as guard vessels where appropriate. Systems will be in place to address unauthorised vessels entering the site and emergency situations as well as reporting mechanisms to ensure the relevant projects and stakeholders are informed. Third party vessels are not prohibited from entering the overall construction area (assuming active Safety Zones are avoided, see Section 4.3); but communication should be established in the event that the construction vessels or NnG Control Room feel the vessel may be at risk from (or to) the activities.

4.4.2 Recommended Routes and Entry /Exit Gates

28. NnGOWL has identified suitable vessel transport routes and entry / exit points to the construction areas as detailed in Section 12. These will be recommended for use by construction vessels to ensure they do not increase the risk of encounters with other commercial, recreational or fishing traffic in proximity to the construction area, and to ensure local users are aware of areas they are likely to encounter construction vessels associated with the Wind Farm. The following have been considered as part of the route designation process:

- Existing commercial vessel routeing;
- Known anchorage areas;
- Other developments and their associated traffic;
- Recreational routes (likely seasonal);
- Fishing areas; and
- Consultation with local port operators relevant to the construction base.

29. These defined routes and entry/exit points will be used by construction vessels[2] to ensure they do not increase the risk of encounters with other commercial, recreational or fishing traffic within the

[2] It is noted that the recommended routes are intended to be indicative only. The Master of any vessel may alter their vessel's course should navigational safety dictate in line with COLREGs.

surrounding sea area, and to ensure local users are aware of areas where they are likely to encounter vessels associated with construction of the Wind Farm.

30. The routes are intended to provide an indication as to likely general passage of project vessels for the benefit of local marine stakeholders. As such they are not compulsory, and the Master of any vessel may alter their vessels course should navigational safety dictate in line with the International Regulations for Preventing Collisions at Sea (COLREGs) (International Maritime Organization (IMO), 1972).

31. During the construction phase NnGOWL shall liaise with local port operators to appropriately manage vessel movements in the area.

4.5 Construction Vessels

32. Vessels used on site as part of the construction of the Wind Farm will be audited by NnGOWL to ensure they comply with legislation appropriate for their class and area of operation. It shall also be ensured that the vessels' on-board Health and Safety requirements meet those laid out by the NnGOWL Health, Safety and Environment Plan and Management Standards. The audits will follow the International Marine Contractor Audit (IMCA) standard.

33. The audits will also ensure that vessel crew meet the requirements for the size, type and area of operation in line with the Standards for Training, Certification and Watch keeping (STCW) set out by the IMO, and any site-specific requirements implemented by NnGOWL above minimum standards.

34. Any required survey, certification and inspection arrangements will be discussed and agreed with the relevant MCA Marine Office in advance of works commencing where necessary.

35. All construction vessels will be equipped with AIS receivers and transmitters.

36. Vessel operators will be made aware of the Scottish Marine Wildlife Watching Code (SNH, 2017). The Code will be referred to during toolbox talks for good practice on vessel activity. The Code includes measures to minimise potential disturbance to marine mammals and birds, such as avoiding sudden unpredictable changes in speed, direction and engine noise, and ensuring engines and propellers are well maintained to minimise noise.

37. Details of the types of construction vessels to be employed can be found within Section 10.

4.5.1 Cable Laying and other Operations involving Vessels Restricted in their Ability to Manoeuvre

38. Vessels that are Restricted in their Ability to Manoeuvre (RAM) will be utilised during cable installation works. These shall comply with COLREGS which is the international convention for regulating vessel movements. All vessels regardless of 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 are able to transmit safety warnings on Very High Frequency (VHF) to inform other vessels of their actions using the 'Sécurité' message, if the messages contain important safety information relevant to navigation. Communications between the RAM vessels and the Marine Coordination Centre will be ongoing throughout their operation.

39. RAM vessels shall comply with vessel type regulation information transmitted through AIS and show current navigational statuses at all times to ensure other vessels operational on AIS will identify that they are a vessel engaged in a restricted manoeuvrability operation.

40. Cable laying activities will be publicised through the notification procedures (see Section 6), and if found necessary, guard vessels may be employed during the cable laying period.

4.6 Injury, Destruction or Decay of the Project

41. NnGOWL will notify the Licensing Authority, in writing, in the case of injury to, destruction or decay associated with any Wind Farm infrastructure during construction. The Licensing Authority 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 advisers.

5 Navigational Safety Measures during Operation and Maintenance

5.1 Introduction

42. This section sets out the navigational safety measures that NnGOWL will implement during the Operation and Maintenance (O&M) of the Wind Farm, specifically detailing the conditions required by the consent.

5.2 Operational Lighting and Marking

43. Marine and aviation marking, including lights, visual marks and construction buoyage will be provided in accordance with the NLB, the CAA, MCA and Ministry of Defence (MoD) requirements. Detailed information relating to lighting and marking of the Wind Farm during the operational phase is set out in the LMP.

44. Prior to commencing construction of the Project, NnGOWL completed an "Application for Statutory Sanction to Alter/Exhibit" form and submited this to NLB for the necessary sanction to be granted.

45. Based on consultation with the NLB, no buoyage is required during the operational phase.

5.3 Operational Safety Zones

46. NnGOWL are not intending to utilise operational safety zones during normal operations. However, this decision will be kept under review, and where it is considered necessary for the purposes of safe navigation, NnGOWL may consider applying for 50 m operational safety zones around structures.

47. During the O&M phase a 500m radius around all major maintenance works being undertaken, major maintenance works being defined in the 2007 Regulations, at Regulation 2, as 'works relating to any renewable energy installation which has become operational, requiring the attachment to, or anchoring next to, such an installation of a self-elevating platform, jack-up barge, crane barge or other maintenance vessel'. The safety zones will be active when a vessel involved in undertaking major maintenance works is attached to, or anchored next to, the renewable energy installation; however, these safety zones will not include service operation vessels used during walk to work activities. Up to FOUR safety zones for Wind Farm purposes may be active at any given time.

5.4 Management of Operation and Maintenance Activities

48. This section describes how the operations and maintenance activities of the Wind Farm will be managed from a navigational safety perspective.

5.4.1 NnG Control Room

49. Operations and Maintenance activities will be managed from the NnG Control Room. The NnG Control Room will be the focus of marine activities and coordinate all communications internally and to third parties. A copy of the Operational Phase ERCoP will also be held at the NnG Control Room and it will be the main point of contact in the event of emergency incidents.

50. The NnG Control Room, as part of the necessary O&M facilities, will have AIS and radar coverage installed. By using these facilities other marine users within and in proximity to the Wind Farm can be monitored from the NnG Control Room. This will be in addition to visual observations by personnel on wind farm vessels working within and in proximity to the Wind Farm.

5.4.2 Recommended Routes and Entry /Exit Gates

51. As for construction, NnGOWL has identified suitable vessel transport routes and entry/exit points to the operational wind farm area. These are set out in Section 12.

52. These defined routes and entry/exit points will be used by operations and maintenance vessels[3] to ensure they do not increase the risk of encounters with other commercial, recreational or fishing traffic within the sea area, and to ensure local users are aware of areas where they are likely to encounter vessels associated with the O&M of the Wind Farm.

53. These defined routes and entry/exit points will be used by Wind Farm vessels to ensure they do not increase the risk of encounters with other commercial, recreational or fishing traffic within the surrounding sea area, and to ensure local users are aware of areas where they are likely to encounter vessels associated with construction of the Wind Farm.

54. The routes are intended to provide an indication as to likely general passage of project vessels for the benefit of local marine stakeholders. As such they are not compulsory, and the Master of any vessel may alter their vessels course should navigational safety dictate in line with COLREGs (IMO, 1972).

55. During the operational phase liaison will also be ongoing with local port operators to appropriately manage vessel movements in the wider sea area.

5.5 Operation and Maintenance Vessels

56. All vessels used on site as part of the NnGOWL operational phase will be audited to ensure they comply with legislation appropriate for its class and area of operation. It shall also be ensured that the vessels' on-board Health and Safety requirements meet those laid out by the NnGOWL Safety Management System. The audits will follow the IMCA standard and will be undertaken regularly during the operational phase.

57. The audits will also ensure that vessel crew meet the requirements for the size, type and area of operation in line with the STCW set out by the International Maritime Organisation, and any site specific requirements implemented by NnGOWL above minimum standards.

58. All O&M vessels will be equipped with AIS receivers and transmitters.

59. Vessel operators will be made aware of the Scottish Marine Wildlife Watching Code (SNH, 2017). The Code will be referred to during toolbox talks for good practice on vessel activity. The Code includes measures to minimise potential disturbance to marine mammals and birds, such as avoiding sudden unpredictable changes in speed, direction and engine noise, and ensuring engines and propellers are well maintained to minimise noise.

5.5.1 Cable Maintenance and other RAM Operations

60. Vessels RAM may be used during cable maintenance operations and shall comply with COLREGS. The RAM vessels will be able to transmit safety warnings on VHF to inform other vessels of their actions using the 'Sécurité' message (if the messages contain important safety information relevant to navigation).

[3] It is noted that the recommended routes are indicative therefore are not compulsory. The Master of any vessel may alter their vessel's course should navigational safety dictate in line with COLREGs.

61. Cable maintenance will be publicised through the notification procedures (see Section 8), and if found necessary via risk assessment, guard vessels may be employed during cable maintenance periods.

5.6 Subsea Cable Inspections

62. The subsea interconnector and inter-array cables will be subject to periodic inspection to ensure they remain buried and protected. Further information on the inter-array and interconnector cables will be provided within the Cable Plan. Concerns in relation to the cables or protection identified by other users of the sea, or via the inspection process will be promulgated via the methods set out in Section 6. In the event that any hazards to navigation are identified (e.g. exposed cables), NnGOWL will contact the MCA and the NLB to determine suitable mitigation (e.g. temporary buoys, guard vessel) until such a time as permanent measures were in place.

5.7 Hydrographic Surveys

63. As per the requirements of MGN 543 (MCA, 2016), NnGOWL will complete post-installation hydrographic surveys of the site to the International Hydrographic Organization (IHO) Order 1a survey standard. On completion of all these surveys the data and corresponding report of survey will be supplied to the MCA hydrography manager for review. Once approved, it will subsequently be supplied to the UKHO, with notification to the Licensing Authority provided.

5.8 Injury, Destruction of Decay of the Project

64. NnGOWL will notify the Licensing Authority, in writing, in the case of injury to, destruction or decay of any aspect of the Wind Farm during O&M. The Licensing Authority will advise of any remedial action to be taken and any AtoN to be displayed following consultation with the MCA, NLB or any such required advisers.

6 Promulgation of Information

6.1 Introduction

65. This section provides information on the proposed approach to distributing and issuing Notices to Mariners (NtMs) and other appropriate notifications to the relevant stakeholders and marine users to advise them of activities which may impact on their navigation.

6.2 Local Notice to Mariners

66. Local Notice to Mariners (LNtMs) will be issued when required during each phase of the Project. The LNtMs will be concise, detailing navigational safety information and may include, but not be limited to, the information set out in Table 6-1.

Table 6-1: Local Notice to Mariners Content

INFORMATION	SUMMARY DESCRIPTION
Title	Shall clearly state the document is a LNtM and provide a short relevant title about the scope of the topic. This should include the date of issue and the notice number.
Supplementary Information	Details of the organisation and project issuing the LNtM and any relevant LNtMs issued prior to the current one.
Details	• Date / time of start / finish and location of work (coordinates in Latitude and Longitude - degrees, minutes and decimals of minutes) • Vessels on site including call signs • Activity being undertaken • Specific risks to navigation and presence of safety zones if applicable.
Contact Details	Sufficient details to allow mariners to contact the organisation issuing the LNtM.
Guard Vessel and Safety Zone Detail	Details of any guard vessels, or active safety zones.
Links to Additional Information	Provided only if absolutely necessary.

67. Specific actions required during certain phases of the Project are set out in the sections below.

6.2.1 Prior to Commencement of Construction

68. NnGOWL ensured, as soon as reasonably practicable prior to commencement of construction of the Project, that local mariners, fishermen's organisations and HM Coastguard, in this case Aberdeen Coast Guard Operation Centre (CGOC), were made fully aware of the Licensed Marine Activity through LNtMs or any other appropriate means.

6.2.2 During Construction

69. NnGOWL will notify local mariners, fishermen's organisations and HM coastguard (Aberdeen CGOC), of the progress of the construction of the Project through LNtMs or any other appropriate means. This includes faults to AtoNs which may impact navigational safety.

6.2.3 Upon Final Commissioning

70. NnGOWL ensured that local mariners, fishermen's organisations and HM coastguard (Aberdeen CGOC) were made fully aware of the completion of construction of the Project.

6.2.4 During operation and maintenance

71. NnGOWL will ensure that relevant stakeholders are informed via LNtMs, or other appropriate means, of any planned or unplanned maintenance activities that are outside day to day maintenance activities carried out at the Wind Farm.

6.3 Admiralty Notices to Mariners (UKHO)

72. Admiralty NtMs are issued by the UKHO and can include chart corrections. The UKHO issues these on a weekly basis to provide physical corrections to charts and associated publications. It is the responsibility of mariners to look up the weekly editions of Admiralty NtMs (which can be found on the UKHO website) and to make corrections to the charts on-board their vessel.

6.3.1 Prior to the Commencement of Construction

73. NnGOWL notified, as soon as reasonably practicable prior to commencement of construction, the UKHO of the proposed Project to facilitate the promulgation of maritime safety information and updating of nautical charts and publications through the national NtMs system. This ensured relevant details associated with the Project were distributed.

6.3.2 During Construction

74. NnGOWL will notify the UKHO of the progress of the construction of the Project to facilitate the promulgation of maritime safety information and updating of nautical charts and publication through the national NtMs system.

75. Temporary and Preliminary (T&P) NtMs are a type of NtM which indicate works about to commence and temporary changes to charts. NnGOWL will issue these T&P NtMs as and when required during the construction period. A T&P NtM was issued by NnGOWL to the UKHO at the start of the construction works and the UKHO is likely to issue the NtM as a chart correction covering the Wind Farm Area as "Construction in Progress" until construction is complete.

6.3.3 Upon Commissioning

76. NnGOWL notified the UKHO of the completion of construction of the Project to facilitate the promulgation of maritime safety information and updating of nautical charts and publications through the national NtM system. NnGOWL provided, within one month of the completion of construction of the Project the "as-built" positions and maximum heights of all turbines, OSPs and any sub-sea infrastructure, to the UKHO for aviation and nautical charting purposes.

6.4 Aviation

77. A Notice to Airmen (NOTAM) is a notice filed with the CAA to alert aircraft pilots of potential hazards along a flight route or at a location that could affect the safety of the flight.

6.4.1 Prior to the Commencement of Construction

78. There is an international civil aviation requirement for all structures of 300 feet (91.4m) or more to be charted on aeronautical charts. Accordingly, such structures will be reported to the Defence Geographic Centre (DGC) which maintains the UK's data base of tall structures (the Digital Vertical Obstruction File) at least 10 weeks prior to the start of construction. The point of contact is: 0208 818 2702, mail to dvof@mod.uk. The DGC require the following information:

- Accurate location of the turbines;
- Accurate maximum turbine heights;
- Accurate maximum height of any construction equipment required to build the turbines;
- The lighting status of the turbines;
- The estimated start / end dates for construction;
- Estimate of when the turbines are scheduled to be removed; and
- Confirmation of the completion of construction.

79. In order to ensure that aviation stakeholders are aware of the turbines while aviation charts are in the process of being updated, organisations may also need to be notified through the means of a NOTAM. To discuss / arrange an associated NOTAM, NnGOWL contacted the CAA's Airspace Regulation (0207 453 6599, mail to AROps@caa.co.uk) and provided the same information as required by the DGC at least 14 days prior to the start of construction.

6.4.2 Upon Commissioning

80. The "as-built" positions and maximum heights of all offshore structures associated with the Project were be reported to the DGC within one month of the completion of the works for aviation charting purposes.

6.5 Kingfisher Bulletins and KIS-ORCA

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

6.5.1 Prior to Commencement of Construction

82. NnGOWL ensured that details of the Project were promulgated in the Kingfisher Fortnightly Bulletin, as soon as reasonably practicable prior to the commencement of construction, to inform fishery stakeholders of the vessel routes, timings, location of the Project and of the relevant operations.

6.5.2 During Construction

83. NnGOWL ensured that the progress of the construction of the Project is promulgated in the Kingfisher Fortnightly Bulletin to inform fishery stakeholders of the vessel routes, the timings and the location of construction activities.

84. Such notification to the Kingfisher Fortnightly Bulletin may include, for example:

- An overview of the Project;
- Roles and Responsibilities;
- Method statements relevant to the scope of work for which the notification is issued;
- Offshore activity schedule;
- Navigational safety procedures;
- Safety zones or advisory passing distances; and
- Any relevant drawings or other information.

6.5.3 Upon Commissioning

85. NnGOWL ensured that the completion of construction of the Project was promulgated in the Kingfisher Fortnightly Bulletin to inform fishery stakeholders.

6.5.4 During operation and maintenance

86. NnGOWL will ensure that notices are issued to the Kingfisher Fortnightly Bulletin detailing any planned and unplanned maintenance activities that are outside the day to day maintenance activities associated with the Wind Farm.

6.6 UKHO

87. Wind turbines will be charted by the UKHO using the magenta turbine tower or wind farm area chart symbol (see 'NP 5011 – Symbols and Abbreviations used in Admiralty Charts' publication (UKHO, 2016a)) on appropriate scale charts. Subsea cables (inter-array cables) associated with the Wind Farm will also be charted on appropriately scaled charts.

6.7 Radio Navigational Warnings

88. 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 at the Wind Farm are:

- Failures to light signals, fog signals, buoys or other aids to navigation;
- Establishing major new aids to navigation;
- Cable laying activities; or
- Other underwater operations that may constitute potential dangers in or near shipping lanes.

89. Once the details of an activity on site are promulgated via the standard LNtM process, the UKHO will then decide if the warning should be transmitted as a Radio Navigational Warning. If deemed as the appropriate action, the UKHO will issue the navigational warning. In the context of Radio Navigational Warnings the UKHO act as the Navigational Area (NAVAREA) I (NE Atlantic) Co-ordinator for the IMO

and IHO Worldwide Navigational Warning Service (WWNWS) and also as the UK National Co-ordinator for issuing coastal navigational warnings.

90. The MCA however is the overarching body responsible for broadcasting the warnings and are the organisation responsible for charging to broadcast them.

91. For information, the broadcasts tend to be made in the following way, controlled by the UKHO:

- For vessels in NAVAREA1 broadcasts are made through Enchanted Group Call Safety NET within 30 minutes of receiving the navigational warning or at the next scheduled broadcast (every 12 hours). They are also broadcast by Navtex twice a day.
- As UK Coastal Navigational Warnings (WZs) by appropriate Navtex station at each transmission time (every 4 hours) or upon receipt of the information if it is of a vital nature. They are also broadcast by VHF or Medium Frequency (MF) radio from selected MCA stations at the next scheduled broadcast and every 12 hours thereafter.

92. NnGOWL will ensure that no radio beacon or radar beacon operating in the Marine frequency bands are installed or used during the construction of the Project and the O&M of the Wind Farm without the prior written approval of the Office of Communications (OfCom).

6.8 Vessel Reports

93. NnGOWL will publish the name and function of any vessel, agent, contractor or subcontractor required for the construction of the Project or operation of the Wind Farm via a Vessel Report published on the NnGOWL webpage (https://nngoffshorewind.com). Updated details will be provided no later than five days prior to the vessel, agent, contractor or subcontractor beginning its engagement with the construction or operational activities.

94. Where applicable, the Vessel Report will include the following details for any vessel listed:

- Master's name;
- Vessel type;
- IMO number;
- Vessel owner; and
- Operating company.

7 Emergency Response

7.1 Emergency Response Cooperation Plan

95. A full ERCoP has been produced for both the Construction Phase and Operational Phase and includes, but not be limited to, the following:

- Roles and responsibilities of NnGOWL in an emergency;
- Details of the installation to be built;
- CGOC;
- Search and Rescue (SAR) Facilities and their response capability;
- Medical advice and assistance;
- Firefighting, chemical hazards, trapped persons etc;
- Survivor shore reception arrangements;
- Suspension/ termination of SAR action;
- Criminal action and accidents to persons;
- Media relations;
- Exercises;
- Unexploded ordnance and wreck materials located on or near to Offshore Renewable Energy Installations (OREIs);
- Wreck or wreck materials; and
- Counter pollution.

7.2 Marine Incident Reporting

96. In relation to Safety, Health and Environment or pollution incidents, an incident reporting process is set out in the Emergency Response Plan, which will be followed by all vessels and personnel. This sets out the reporting process to be followed and the roles and responsibilities in relation to incident reporting and management, and is defined with reference to Condition 6 of the S36 Consent:

> *"In the event of any breach of health and safety or environmental obligations relating to the Development during the period of this consent, the Company must provide written notification of the nature and timing of the incident to the Scottish Ministers within 24 hours of the incident occurring. Confirmation of remedial measures taken and/or to be taken to rectify the breach must be provided, in writing, to the Scottish Ministers within a period of time to be agreed by the Scottish Ministers."*

97. Matters relating to emergency response, including the reporting of any such incidents are set out in the relevant ERCoP.

8 Location of Working Ports

98. A number of ports have been considered to support various elements of the construction and O&M phases. A summary of the key working ports are listed within this section, noting that further details are provided in the Construction Traffic Management Plan (Ref NNG-NNG-ECF-PLN-0014).

8.1 Port of Dundee

99. Dundee port is located on the east coast of Scotland, on the north side of the River Tay. The port is ideally placed to serve the oil and gas, and renewable industries. With its deep water berths and extensive landside project areas the port regularly accommodates significant fabrication projects.

100. The Port of Dundee was used for turbine pre-assembly and as a marshalling port for installation vessels and Crew Transfer Vessels (CTVs).

8.2 Eyemouth Harbour

101. Eyemouth harbour is located on the east coast pf Scotland, and can accommodate fishing, leisure and commercial vessels. The harbour entrance is 17m wide and while it offers 24 hour, lock-free access to deep berths, water depths are variable therefore the Harbour Master should be contacted for up to date information.

102. Eyemouth Harbour is being used to facilitate crew transfer, minor transfer of supplies, fuel and waste, and is where the NnG Control Room is located (see Sections 4.4.1 and 5.4.1).

8.3 Montrose Port

103. Montrose Port is located along the north and south banks of the South Esk River in Montrose, approximately mid-way between Dundee and Aberdeen along the east coast of Scotland. The port has approximately 1,000m of quayside facilities along with 130,000s m^2 of storage space and is able to offer berths to a depth of up to 8m.

104. Montrose Port has been utilised in a similar way to Eyemouth during construction.

8.4 Port of Leith

105. The port of Leith is situated within the Albert Dock area of Leith to the north of Edinburgh.

106. The port has been used to facilitate crew transfers to a variety of offshore construction and support vessels, minor transfer of supplies, fuel and waste (see Section 8.2).

8.5 Port of Methil

107. The port of Methil is situated on the northern shore of the Firth of Forth and is one of the satellite ports of the Fife Ports.

108. The port has a Fabrication Yard which was used for jacket fabrication activities.

8.6 Operation and Maintenance Phase

109. The O&M Base and pontoons used for routine operations will be located in Eyemouth Harbour. Ports used during unplanned or emergency works will be dependent on the nature of the works and vessel procurement.

9 Management and Coordination of Vessels

110. In summary, during construction, the following measures are in place:

- A NnG Control Room has been established from where construction activities are managed;
- Permission for construction vessels to enter the Wind Farm Area and safety zones are managed by the NnG Control Room using a Permit to Work system;
- The NnG Control Room route vessels to an agreed location or berth/anchorage;
- The NnG Control Room constantly monitor vessels and personnel via communication with vessels and AIS for any potential vessel access conflicts. The NnG Control Room also detect and monitor unauthorised vessels;
- The NnG Control Room define safety zones, no-go locations etc.
- The NnG Control Room obtain and provide localised weather information for vessels associated with the Project to assist in planning the work to be undertaken;
- The NnG Control Room will be the central contact point for contractors in case of an emergency. They will maintain a copy of the Construction Phase and Operational Phase ERCoP; and
- Issue NtMs after being reviewed and approved by NnGOWL.

111. All marine operations and vessel movements will be planned to give due regard to the requirements of the NSVMP.

112. During operation, similar provisions for vessel coordination will be established with marine coordination continuing from the NnG Control Room throughout the operational phase. Further information on marine coordination during the operational phase will be provided, for approval, in the OMP.

10 Types and Specifications of Vessels

113. The representative vessel types that have been used during the construction of the Project are set out below. As set out in Table 1-1, NnGOWL are required to notify the Scottish Ministers of the final vessel list prior to the commencement of construction or operation works. This will be provided as required once the information is known.

114. Vessel crews will be required to 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. NnGOWL 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 described roles.

115. Vessel crews will be required to meet the requirements for the size, type and area of operation in line with the STCW set out by the IMO, and any site specific requirements implemented by NnGOWL above minimum standards.

116. All vessels involved in the construction of the Project will be marked and lit as per the COLREGS (IMO, 1972) and in accordance with the UK Standard Marking Schedule for Offshore Installations (BEIS, 2011). All of the construction vessels will be equipped with AIS receivers and transmitters.

117. NnGOWL 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 the EMP and the LMP.

10.1 Overview of Main Construction Vessels

118. The following sections set out examples of those types of vessels that have been and will be used during the construction works, specifically relating to:

- Piled foundation, jacket and OSP topside installation.
- Turbine installation.
- Export cable installation.
- Inter-array cable installation.
- Construction support.

119. Further details are also set out in the CoP and CMS document. The final list of vessels to be used will be provided to the Scottish Ministers in advance of their engagement in Construction activities, as required under the consent conditions (see Table 1-1).

120. Specifications are provided in Table 11-1

10.1.1.1 Jacket, Pile, Casing and OSP Topside Installation

121. The foundation pin piles and casings were installed using the Semi-Submersible Crane Vessel (SSCV) *Sleipnir*. Once pile installation was complete the SSCV installed the jacket substructures that supported the turbines and the OSP topsides. The SSCV travelled to the wind farm site and remained on site for the duration of pile and jacket installation. The SSCV used a local port for shelter or leave the field to undertake bunkering operations when required.

122. The SSCV *Sleipner* was used for installation of jackets following completion of the pile installation.

123. The OSP topsides were delivered direct to site from the port of fabrications and installed by SSCV *Sleipnir* during the jacket installation campaign.

124. Cable hook up and commissioning of the OSPs was supported by either Jack Up Vessels (JUV) or Service Operations Vessels (SOV).

10.1.1.2 Transport Vessels

125. The first batch of foundation pin piles and casings were transported by the SSCV installing the pin piles. The following foundation pin piles and casings were transported by a HLV / Offshore Construction Vessel (OCV) / Platform Supply Vessel (PSV) from port to the SSCV. Delivery was phased to align with the Construction schedule.

126. The jackets were transported using Heavy Transport Vessels (HTVs) and barges, directly to the wind farm. The HTVs, barge and tug sheltered until the jackets were ready to be installed then travelled directly to the wind farm site.

127. The OSP were transported by a barge and tug from the port of fabrication. The barge and tug sheltered until the OSP topsides were ready to be installed and then travelled directly to the wind farm site.

10.1.1.3 Support Vessels

128. A HLV was used to support the pin pile, casing, and jacket installation vessel.

129. There were up to two dedicated OCVs used to clean the piles prior to jacket installation, grouting and surveys.

130. Up to two tugs assisted with mooring lines from the HTV / barge.

10.1.2 Turbine Installation Vessels

131. The turbines were collected from the Port of Dundee and transported directly to the site by JUV.

10.1.2.1 Transport Vessels

132. The turbines were delivered to the Port of Dundee from various locations.

10.1.2.2 Support Vessels

133. Two CTVs supported the turbine installation JUV.

10.1.3 Inter-Array Cable Installation Vessels

134. A Cable Lay Vessel (CLV) collected the inter-array cable from port and delivered and installed the inter-array cable at the Wind Farm Area. The inter array cable installation campaign was supported by an Anchor Handling Tug (AHT) that carried out the pre-lay grapnel run (PLGR), a survey vessel that undertook pre- and post-lay survey and a fall pipe vessel where required to deploy cable protection.

10.1.4 Export Cable Installation Vessels

135. A CLV delivered and installed the export cables along the Offshore Export Cable Corridor. An AHT was used to complete the PLGR and an OCV was required to assist in cable burial.

10.1.4.1 Support Vessels

136. A dive support vessel assisted in the cable pull operations of the export cables at the landfall location..

137. An anchor-handling tug prepared the seabed for cable installation by undertaking a pre-lay grapnel run.

10.1.5 Additional Construction Support Vessels

138. Guard vessels have been utilised as required and mobilise from a local port.

139. CTVs have been used as required for transporting personnel to, from and around the Wind Farm Area.

140. A Walk to Work vessel has been utilised as required to assist with pull in operations, termination, testing and preparation.

10.2 Overview of Main Operation and Maintenance Vessels

141. The following are examples of the types of vessels that will be used during operation and maintenance works:

- CTV: Routine turbine and foundation O&M activities
- JUV: Large component replacements, i.e. blades, nacelles, gear box.
- OCV: Maintenance or repairs that don't require heavy lifting operations. Cleaning of marine growth.
- CLV: Cable repairs or replacement.
- SOV / Walk to Work Vessel: Being considered for routine servicing, and / or smaller maintenance works that do not require heavy lift operations.

142. Anticipated specifications are provided in Table 11-2.

11 Numbers and Movements of Vessels

11.1 Construction Vessels

143. The number of vessels within the Wind Farm Area at any one time will vary over the course of the construction period, with peaks in vessel activity reflecting the timing of major installation works.

144. For each vessel type predicted to be entering the Wind Farm Area, Table 11-1 below 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 they will make (where this information is available). One return journey equates to the vessel transiting to the Wind Farm Area once, and then returning to port. It should be noted that the number of transits given is a best estimate based on the available information at the time of writing, and that the actual numbers may differ during the construction phase.

145. It should be noted that the daily movements of construction vessels have not yet been determined as construction ports are still to be confirmed.

146. It is noted that in addition to the vessels listed, dedicated guard vessels may be employed during certain stages of construction.

Table 11-1 Indicative Construction Vessel Numbers, Key Construction Activities and Return Journeys

VESSEL TYPE	ANTICIPATED TOTAL NUMBER	VESSEL SPECIFICATIONS	KEY CONSTRUCTION ACTIVITIES	APPROXIMATE NUMBER OF RETURN JOURNEYS
Pile and Jacket Installation and Delivery				
SSCV	1	Length: 198m Breadth: 87m Depth 43.5m Transit draft: 10.5m Capable to cruise at (knots): 9.5	Mobilise with first batch of piles, casings and grout. Stay on site for the duration of pile and jacket installation. May utilise local port for shelter as required.	4
HLV	1	Length: 199m Breadth: 48 Depth 15 m Transit draft: 7.5 m Capable to cruise at (knots): 13.5	May be mobilised as an alternative to the SSCV for jacket installation.	1
HLV / OCV / PSV	1	Length: 216m Breadth: 43m Depth: 13m Transit draft: 8.5m (expected) Capable to cruise at (knots): 12.5	Pile, casing and grout load delivery from marshalling harbour to main installation vessel. Will assist main installation vessel by undertaking pre-installation and post-installation at each foundation location.	9

VESSEL TYPE	ANTICIPATED TOTAL NUMBER	VESSEL SPECIFICATIONS	KEY CONSTRUCTION ACTIVITIES	APPROXIMATE NUMBER OF RETURN JOURNEYS
OCV	2	Length: 98.6m Breadth: 19m Draft max: 6.6m Design draught: 6.0m Capable to cruise at (knots): 15.5	Clean piles prior to jacket installation, grouting and surveys	6
HTV	6	Length: 225m Breadth: 48m Draft with design load: 10.64m Capable to cruise at (knots): 14.5	Direct delivery of jacket foundations to wind farm site. Will seek shelter until the jackets are ready to be installed and then travel to the array. The delivery will be staggered to meet the installation window.	6
Barge	Up to 2	To be determined.	Direct delivery of jacket foundations to wind farm site. Will seek shelter until the jackets are ready to be installed and then travel to the array.	1 – 8 depending on final tug and barge specification
Tug	Up to 2	To be determined.	The delivery will be staggered to meet the installation window.	
Barge	1	Length: 80m Breadth: 22m Transit draft: 1.5m	Will seek shelter until the OSP topsides are ready to be installed and then travel to the Wind Farm Area.	2

VESSEL TYPE	ANTICIPATED TOTAL NUMBER	VESSEL SPECIFICATIONS	KEY CONSTRUCTION ACTIVITIES	APPROXIMATE NUMBER OF RETURN JOURNEYS
Tug	1	Length: 89m Breadth: 22m Depth: 9.10mCapable to cruise at (knots): 16.4 Bollard pull max (tonnes): 200		
Tug	1	Length: 89 m Breadth: 22 Depth: 9.1 Capable to cruise at (knots): 16.4	Assist with mooring lines from HTV / barge	2
Bunkering	1	To be determined	Bunkering to pile and jacket installation vessels	N/A – as required
Inter-Array and Interconnector Cabling Delivery and Installation				
CLV	1	Length: 161m Breadth: 32.2m Depth: 11.5m Transit draft: 7.1m	Collect inter-array cables and install at wind farm site	4

VESSEL TYPE	ANTICIPATED TOTAL NUMBER	VESSEL SPECIFICATIONS	KEY CONSTRUCTION ACTIVITIES	APPROXIMATE NUMBER OF RETURN JOURNEYS
Walk to Work Vessel	1	Length: 107.95 Breadth: 16.00 Depth: 9.3 Transit draft: 5.5 Capable to cruise at (knots): 12	Assist in pull in operations, termination, testing and preparation	4
CTV	2	Length: 25.75 Breadth: 10.06 Depth: 1.5 Capable to cruise at (knots): 25	Transfer personnel to and from and around the wind farm site	1
Survey Vessel	1	Length: 62m Breadth: 13m Summer draft: 4.65m	Pre- and post-lay cable route surveys.	5
Fall pipe / Cable protection installation vessel	1	Length: 62m Breadth: 13m Summer draft: 4.65m	Installation of cable protection as required.	5

VESSEL TYPE	ANTICIPATED TOTAL NUMBER	VESSEL SPECIFICATIONS	KEY CONSTRUCTION ACTIVITIES	APPROXIMATE NUMBER OF RETURN JOURNEYS
Anchor Handling Tug	1	Length: 35.1 Breadth: 15.00 Depth: 4.07 Transit draft: 3.0 Capable to cruise at (knots): N/A	Seabed preparation – pre lay grapnel run	5
Export Cable Delivery and Installation				
CLV	1	Length: 124.32 Breadth: 31.6 Depth: 6.8 Transit draft: 4.938 laying speed: up to 100m/hr	Deliver and install export cables	2
Anchor Handling Tug	1	Length: 35.1 Breadth: 15.00 Depth: 4.07 Transit draft: 3.0 Capable to cruise at (knots): N/A	Seabed preparation – pre lay grapnel run	1
OCV	1	To be determined	Deployment of burial and trenching tools	N/A – as required

VESSEL TYPE	ANTICIPATED TOTAL NUMBER	VESSEL SPECIFICATIONS	KEY CONSTRUCTION ACTIVITIES	APPROXIMATE NUMBER OF RETURN JOURNEYS
Dive support vessel	1	To be determined	The Project do not intend to undertake any diver operations as part of planned construction activities. However, dive support may be required to assist with intertidal cable pull in.	N/A – as required
Wind Turbine Delivery and Installation				
JUV	1	Length: 115m Breadth: 50m Depth: 9.75m Loadline draft: 5.20m Capable to cruise at (knots): 8-10	Installation of turbines. Will transfer wind turbine components from the marshalling harbour.	Will transfer to marshalling port every 6 – 8 days. Up to 25 journeys anticipated in total.
OSP Hook Up and Commissioning				
JUV	1	To be determined	Support of OSP hook up and commissioning.	1
SOV	1	To be determined	May be used as an alternative to the JUV for OSP hook up and commissioning activities.	1

147. Table 11-1 details the anticipated main construction vessels required to undertake the construction activities detailed within the CoP and CMS. In addition, to the vessels detailed within this table it is anticipated that number of ancillary vessels may be required throughout construction to support these main vessels. For example, additional CTVs may be required during Construction and the number of guard vessels may vary depending on the level of activity being undertaken at any one time. The number and specification of these vessels cannot be confirmed at present but will be reported to Marine Scotland Licensing Operations Team (MS-LOT) in advance of their involvement on the Project through the Vessel Reports.

11.2 Operation and Maintenance Vessels

148. Throughout the O&M phase it is anticipated that major maintenance shall be required in addition to the planned regular maintenance. Major maintenance requirements shall vary from year to year and therefore it is not currently possible to provide a comprehensive schedule for such activity.

149. Example vessel types that will be required during the O&M phase of the Wind Farm are detailed in Table 11-2.

Table 11-2: Example vessel types required during O&M

VESSEL TYPE	KEY O&M ACTIVITIES	EXAMPLE VESSEL SPECIFICATIONS
CTV	Routine turbine and foundation O&M activities.	Length: 25.75 Breadth: 10.06 Depth: 1.5 Capable to cruise at (knots): 25
JUV	Large component replacements, i.e. blades, nacelles, gear box.	Length: 115m Breadth: 50m Depth: 9.75m Loadline draft: 5.20m Capable to cruise at (knots): 8-10
OCV	Maintenance or repairs that don't require heavy lifting operations. Cleaning of marine growth.	Length: 98.6m Breadth: 19m Draft max: 6.6m Design draught: 6.0m Capable to cruise at (knots): 15.5
CLV	Cable repairs or replacement.	Length: 124.32 Breadth: 31.6 Depth: 6.8 Transit draft: 4.938 laying speed: up to 100m/hr
SOV / Walk to Work Vessel	Being considered for routine servicing, and / or smaller maintenance works that do not require heavy lift operations.	Length: 107.95 Breadth: 16.00 Depth: 9.3 Transit draft: 5.5 Capable to cruise at (knots): 12

150. Any large component replacements that are required during O&M may utilise additional vessels for delivery and return of components to shore for recycling, reuse or disposal; or may be delivered and recovered to shore by the installation vessel. In the event that additional vessels are required for delivery it is likely that a HTV or tug and barge similar to those specified in Table 11-1 will be used. In addition, there may also be a requirement for smaller support vessels such as CTVs or guard vessels depending on the size and nature of the work.

12 Indicative Transit Routes

151. Indicative transit routes to site from key construction and operation ports have previously been defined. These defined routes have been used by Project vessels to ensure the risk to safe navigation is minimised. Impacts on third party commercial, recreational or fishing traffic within the surrounding sea area will be mitigated via compliance with COLREGs (IMO, 1972) and effective promulgation of information via the NnG Control Room. These routes will also notify local users of areas where they are likely to encounter vessels associated with the Project.

152. The indicative transit corridors for the major construction vessels between the Wind Farm Area and other relevant ports are presented in Figure 12-1. This includes routes for vessels delivering components direct to the Project and also for delivery of components to the relevant marshalling port. Given that the Project vessels are only likely to be of concern to local users, specific routeing is only shown for the area in the vicinity of the Project. Figure 12-1 shows indicative routes where vessels may approach the Wind Farm Area from a number of potential locations. As required under condition 15 of the s36 consent, precise port locations will be added to a future revision of the NSVMP once confirmed.

153. It should be noted that these indicative routes are not intended to be prescriptive for the purposes of navigation and will not be followed precisely by every vessel. All vessels shall passage plan as per the International Regulations for the Safety of Life at Sea (SOLAS) (IMO, 1974).

154. Some construction vessels routeing from the south may seek nearby shelter until they are required rather than transiting directly to the Wind Farm Area, however the routes have been defined on the assumption that vessels will transit straight to site.

155. Vessels may deviate from these indicative routes for a variety of reasons at the discretion of the vessel's Master, for example due to:

- Compliance with COLREGS (IMO, 1972) or SOLAS (IMO, 1974);
- Prevailing weather, tidal or sea state conditions;
- Navigational hazards as indicated on charts or notified through Notices to Mariners or other such sources;
- Due to the vessel originating from or being bound for a destination not indicated by the transit routes;
- Instructions from the NnG Control Room or other responsible persons in charge of coordinating and managing construction vessel traffic; and
- Such other reasons as the Master of a vessel may deem relevant for the purposes of ensuring the safety of his vessel or another vessel.

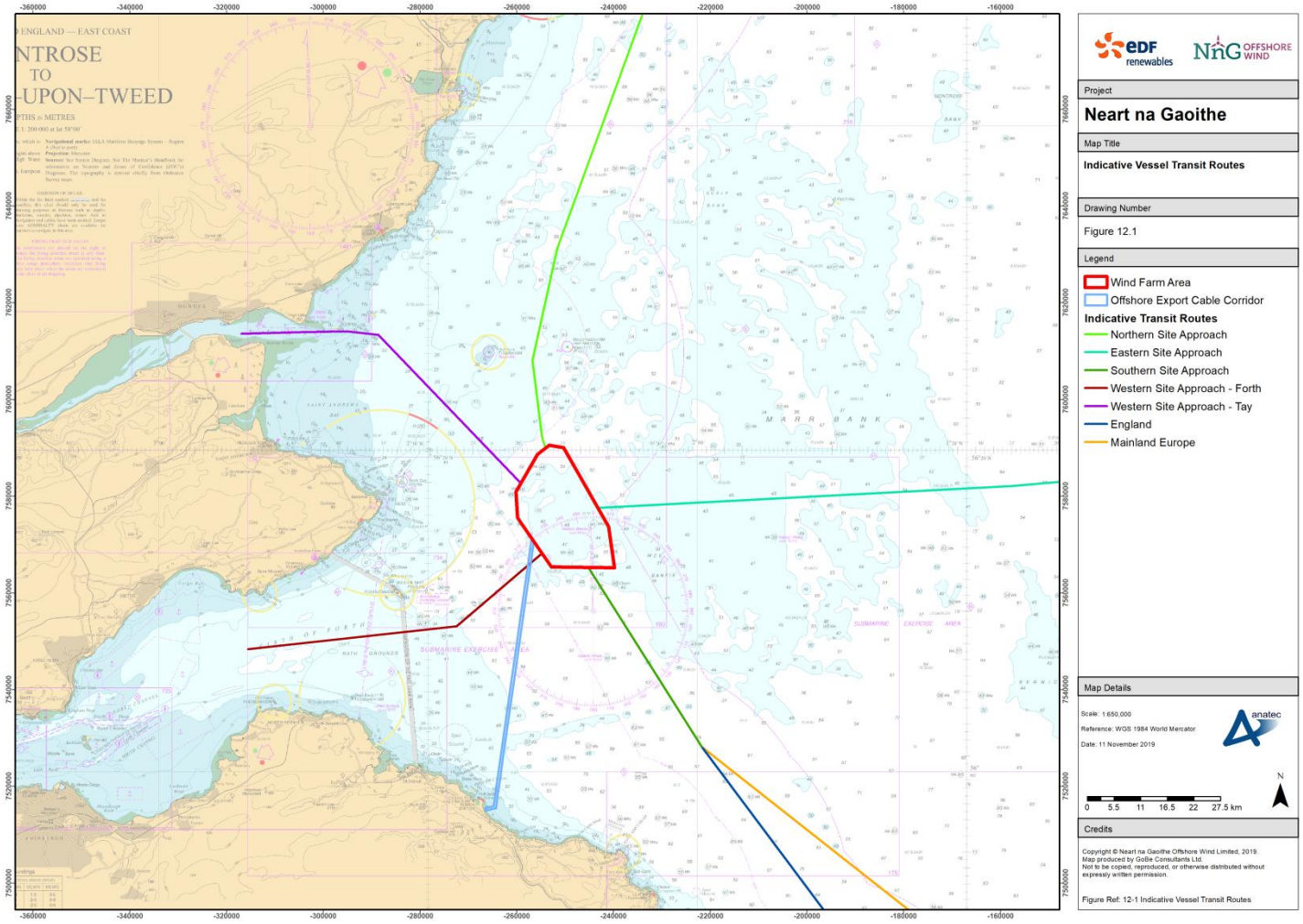

Figure 12-1: Indicative Vessel Transit Routes

13 Anchoring Areas

13.1 Charted Anchorages

156. Charted and uncharted anchorages in the vicinity of the Wind Farm area are presented in Figure 13-1. These have been identified via study of local Admiralty Nautical Charts and Admiralty Sailing Directions NP 54 (UKHO, 2016b).

157. It should be noted that a vessel can anchor in any water which it deems safe and where anchoring is not prohibited.

158. Anchoring is at the discretion of the vessel Master but can be in conjunction with information provided by the NnG Control Room. Standard marine practice however 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 for 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 areas or other navigational features such as spoil grounds or subsea cables.

159. All vessels associated with the wind farm area will take the above into consideration prior to anchoring as per standard marine practise. Construction/maintenance vessels requiring anchorage within the site will request permission to do so from the NnG Control Room.

13.2 Areas where Anchoring should be Avoided

160. Based on a review of the navigational features in the area, the following areas have been identified as being necessary to avoid when anchoring:

- Ammunition dumping ground off Isle of May;
- Foul Area off Crail; and
- Spoil grounds in St Andrew's Bay.

161. The locations of these areas are shown in Figure 13-1. It is unlikely that Wind Farm vessels would attempt to anchor within these areas due to the proximity to the Wind Farm Area.

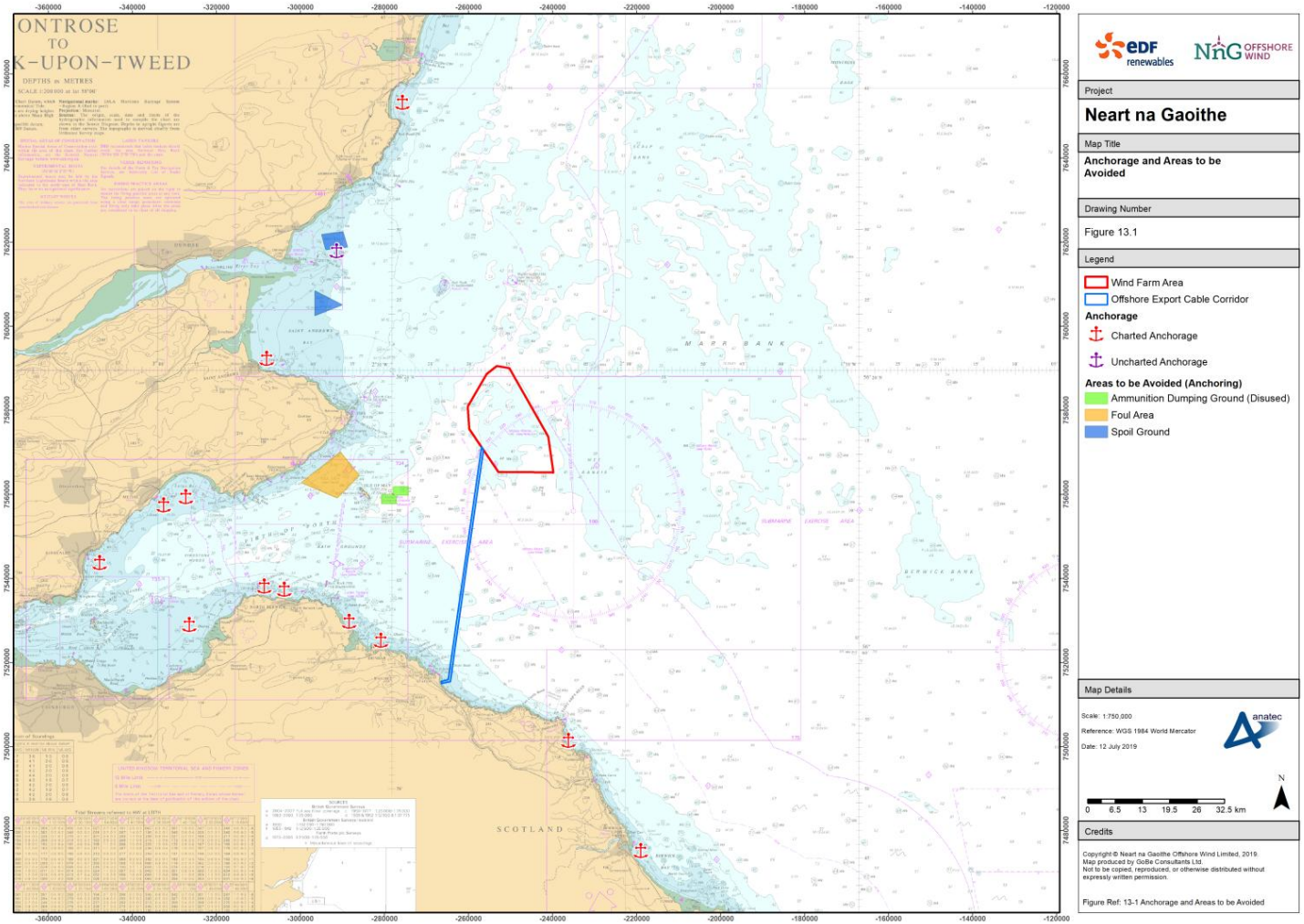

Figure 13-1: Charted Anchorage and Areas to be Avoided

14 Compliance with the Application

162. In addition to the conditions presented in Table 1-1, Condition 7 of the S36 Consent states that:

> *"Except as otherwise required by the terms of this consent, the Development must be constructed and operated in accordance with the Application (as supplemented by the additional environmental information (EIA Addendum), submitted by the Company on 26 July 2018) and any other documentation lodged in support of the Application."*

163. And conditions 3.1.1 of the Wind Farm Marine Licence states that:

> *The Licensee must at all times construct, operate and maintain the Works in accordance with this licence, the Application, the section 36 consent and the plans and programmes approved by the Licensing Authority.*

164. The Application described a range of specification and layout options that could be applied during the construction of the Project. This took the form of a broad design envelope incorporating a variety of options. The Application and supporting documentation detailed the likely marine navigation and aviation requirements for the Project, which adhered to relevant standard guidance. As per the conditions stated above NnGOWL have ensured this NSVMP has been drafted in line with the contents of the Application as it was submitted to the Scottish Ministers.

165. Appendix A provides details as to how the NSVMP has been drafted in compliance with the Application.

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Appendix A – Compliance with the Application

SOURCE AND REFERENCE	DETAILS OF COMMITMENT	IMPLEMENTATION
EIA Report, Chapter 4: Project Description	**Safety Zones** NnGOWL will apply to the Scottish Ministers for a notice declaring safety zones around construction activities and in the vicinity of offshore structures thereafter under specific scenarios. The safety zone notice will be applied for under Section 95 of the Energy Act 2004 in accordance with Schedule 16 of the Energy Act 2004 and the Electricity (Offshore Generating Stations) (Safety Zones) (Application Procedures and Control of Access) Regulations 2007.	See Sections 4.3 and 45.
EIA Report, Chapter 4: Project Description	**Cable Monitoring** The inter-array and Offshore Export Cables will be inspected regularly by use of a (CTV mounted sonar or other suitable technology.	See Section 5.6.
EIA Report, Chapter 11 Shipping and Navigation	**Information Circulation** Appropriate liaison to ensure information on the construction and operation of the Offshore Wind Farm is circulated in Notice to Mariners, Kingfisher Bulletin, Navigation Information Broadcasts and other appropriate media. As part of the Notice to Mariners process the information will be supplied to Imray publications.	See Section 6.
EIA Report, Chapter 11 Shipping and Navigation	**Navigational Chart Marking** While construction work is in progress, Admiralty Charts will provide a note over the Wind Farm Area stating as such including position of construction buoyage. The Project will be charted by the UKHO using the magenta turbine tower chart symbol found in the publication NP5011 - Symbols and Abbreviations used in Admiralty Charts (UKHO, 2016a). The buried, subsea cables associated with the Project will also be charted on the appropriate scale charts. Offshore Export Cables will be charted by the UK Hydrographic Office on the appropriate	See Section 6.

SOURCE AND REFERENCE	DETAILS OF COMMITMENT	IMPLEMENTATION
	scale charts who may provide a note on the charts to state no anchorage areas over charted cables.	
EIA Report, Chapter 11 Shipping and Navigation	**Lighting and Marking** The Project will be marked in line with the International Association of Lighthouse Authorities (IALA) Recommendations on Marking of Man-Made Offshore Structures O-139 (IALA, 2013), and as agreed with NLB, MCA and the CAA.	See Sections 4.2 and 5.2.
EIA Report, Chapter 11 Shipping and Navigation	**Compliance with relevant MCA Guidance (MGN 543 and Annexes)** The Project will be designed and operated in compliance with MGN543. Annex 5 (Requirements, Guidance and Operational Considerations for Search and Rescue) specifies *"Standards and procedures for generator shutdown and other operational requirements in the event of a SAR, counter pollution or salvage incident in or around an OREI."*	See Section 2.
EIA Report, Chapter 11 Shipping and Navigation	**Formulation of an ERCoP as per MCA template** Creation of an ERCoP based on the MCA template and Project Safety Management Systems (SMS), in consultation with the MCA. Procedures will be followed in the event of an emergency situation.	See Section 7.1.
EIA Report, Chapter 11 Shipping and Navigation	**Onshore Operations Base** The onshore operations base will also serve as a Marine Control Centre that will monitor vessel activity (AIS and non-AIS) and record the movements of vessels around the Wind Farm Area as well as infield (company) vessels working at the Offshore Wind Farm. Possible errant vessels identified in construction areas or safety zones will be identified and contacted.	See Sections 4.4.1 and 5.4.1.
EIA Report, Chapter 11 Shipping and Navigation	**Safety zones and guard vessels** Safety zones of 500 m around structures where construction or major maintenance is ongoing. Guard vessels, or another nominated vessel, will be used to monitor passing traffic and contact vessels, which	Safety Zones: Sections 4.3 and 45 Guard Vessels: Section 10.1.5.

SOURCE AND REFERENCE	DETAILS OF COMMITMENT	IMPLEMENTATION
	could infringe the safety zones. 50 m pre-commissioning safety zones may also be included. Minimum safe passing distance may be requested by vessels where safety zones are not applicable.	
EIA Report, Chapter 11 Shipping and Navigation	**Cable protection (inter-array and Offshore Export Cable)** Cables will be protected appropriately taking into account fishing and anchoring practices. Positions of the cable routes notified to Kingfisher Information Services –Offshore Renewables Cable Awareness (KIS -ORCA) for inclusion in cable awareness charts and plotters for the fishing industry.	See Section 6.
EIA Report, Chapter 11 Shipping and Navigation	**Subsea surveys of cables and burial depths** Periodic and planned surveys of cable to monitor burial depths/protection and seabed mobility (cable movement).	See Section 5.6.