MORAY EAST
OFFSHORE WINDFARM

Environmental Management Plan

Moray East Offshore Wind Farm and Associated Offshore Transmission Infrastructure

September 2020

Moray Offshore Windfarm (East) Limited

Produced by Moray Offshore WindFarm (East) Limited	
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Moray East Ecological Clerk of Works	**Legal review (Version 2)**
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Definitions

The following definitions have been used throughout this document with respect to the company, the consented wind farms and how these definitions have changed since submission of the Moray East Environmental Statement (ES) in 2012, the Modified Transmission Infrastructure ES (Modified TI ES) in 2014 and the Moray East Offshore Substation Platform (OSP) Environmental Report in 2017.

- **Moray Offshore Windfarm (East) Limited (formerly known as Moray Offshore Renewables Limited) -** the legal entity submitting this Environmental Management Plan (EMP);
- **Moray East Offshore Wind Farm** - the wind farm to be developed in the Moray East site (also referred as the Wind Farm);
- **The Moray East site** - the area in which the Moray East Offshore Wind Farm will be located. Section 36 Consents and associated Marine Licences to construct and operate up to three generating stations on the Moray East site were granted in March 2014. At that time the Moray East site was known as the "Eastern Development Area" (EDA) and was made up of three sites known as the Telford, Stevenson and MacColl Offshore Wind Farm sites. The Section 36 Consents and Marine Licences were subsequently varied in March 2018; with the Marine Licences additionally varied in July 2019 and April 2020;
- **Telford, Stevenson and MacColl wind farms** – these names refer to the three consented offshore wind farm sites located within the Moray East site;
- **Transmission Infrastructure (TI)** - includes both offshore and onshore electricity transmission infrastructure for the consented Telford, Stevenson and MacColl wind farms. Includes connection to the national electricity transmission system near New Deer in Aberdeenshire encompassing AC OSPs, AC OSP interconnector cables, AC export cables offshore to landfall point at Inverboyndie continuing onshore to the AC collector station (onshore substation) and the additional regional Transmission Operator substation near New Deer. A Marine Licence for the offshore TI was granted in September 2014 (Modified Offshore Transmission Infrastructure (OfTI) Licence) and varied in 2019. A further Marine Licence for two additional distributed OSP was granted in September 2017 and subsequently varied in July 2019. The onshore Modified TI was awarded Planning Permission in Principle in September 2014 by Aberdeenshire Council and Planning Permission in Principle under Section 42 in June 2015;
- **Offshore Transmission Infrastructure (OfTI)** – the offshore elements of the transmission infrastructure, comprising AC OSPs, AC OSP inter-connector cables and AC export cables offshore to landfall (for the avoidance of doubts some elements of the OfTI will be installed in the Moray East site);
- **Moray East ES 2012** – The ES for the Telford, Stevenson and MacColl wind farms and Associated Transmission Infrastructure, submitted August 2012;
- **Moray East Modified TI ES 2014** – the ES for the TI works in respect to the Telford, Stevenson and MacColl wind farms, submitted June 2014;
- **Moray East OSP Environmental Report 2017** – the environmental report comprising of the "Statement Regarding Implications for the Modified TI ES 2014 and HRA". The report was produced in support of the application submitted in May 2017 for the Moray East OSP Marine Licence;
- **The Development** – the Moray East Offshore Wind Farm and OfTI;
- **Design Envelope** - the range of design parameters used to inform the assessment of impacts; and
- **OfTI Corridor** – the export cable route corridor, i.e. the OfTI area excluding the Moray East site.

- **Moray East Offshore Wind Farm Section 36 Consents and Marine Licences** – are comprised of the following:

  Section 36 Consents:

  - Section 36 consent for the Telford Offshore Wind Farm (as varied) – consent under Section 36 of the Electricity Act 1989 for the construction and operation of the Telford Offshore Wind Farm assigned to Moray East on the 19 June 2018.
  - Section 36 consent for the Stevenson Offshore Wind Farm (as varied) – consent under Section 36 of the Electricity Act 1989 for the construction and operation of the Stevenson Offshore Wind Farm assigned to Moray East on the 19 June 2018.
  - Section 36 consent for the MacColl Offshore Wind Farm (as varied) – consent under Section 36 of the Electricity Act 1989 for the construction and operation of the MacColl Offshore Wind Farm assigned to Moray East on the 19 June 2018.

  Marine Licences

  - Marine Licence for the Telford Offshore Wind Farm (as varied) – Licence Number: 04629/20/0 – granted under the Marine (Scotland) Act 2010 & Marine and Coastal Access Act 2009, Part 4 marine licensing for marine renewables construction works and deposits of substances or objects in the Scottish Marine Area and the United Kingdom Marine Licensing Area transferred to Moray East on 19 July 2018.
  - Marine Licence for the Stevenson Offshore Wind Farm (as varied) – Licence Number: 04627/20/0 – granted under the Marine (Scotland) Act 2010 & Marine and Coastal Access Act 2009, Part 4 marine licensing for marine renewables construction works and deposits of substances or objects in the Scottish Marine Area and the United Kingdom Marine Licensing Area transferred to Moray East on 19 July 2018.
  - Marine Licence for the MacColl Offshore Wind Farm (as varied) – Licence Number: 04628/20/0 - granted under the Marine (Scotland) Act 2010 & Marine and Coastal Access Act 2009, Part 4 marine licensing for marine renewables construction works and deposits of substances or objects in the Scottish Marine Area and the United Kingdom Marine Licensing Area transferred to Moray East on 19 July 2018.
  - Marine Licence for Moray Offshore Windfarm (East) Limited (as varied) – Licence Number: 07086/20/0 – consent under the Marine (Scotland) Act 2010 & Marine and Coastal Access Act 2009 (as amended), Part 4 Marine Licensing to deposit, backfill of seabed depressions within the Scottish marine area and the UK marine licensing area.

  OfTI Licences – are comprised of the following:

  - Marine Licence for the Offshore Transmission infrastructure (as varied) – Licence Number 05340/19/0 – granted under the Marine (Scotland) Act 2010 & Marine and Coastal Access Act 2009, Part 4 marine licensing for marine renewables construction works and deposits of substances or objects in the Scottish Marine Area and the United Kingdom Marine Licensing Area (referred to as the "OfTI Marine Licence").
  - Marine Licence for two additional distributed OSPs (as varied) – Licence Number 06347/19/0 – granted under the Marine (Scotland) Act 2010 & Marine and Coastal Access Act 2009, Part 4 marine licensing for marine renewables construction, operation and maintenance works and the deposit of substances or objects in the Scottish Marine Area and the United Kingdom Marine Licensing Area (referred to as the "OSP Marine Licence").

Executive Summary

The Moray East Offshore Wind Farm is being developed by Moray Offshore Windfarm (East) Limited (Moray East), a joint venture partnership between OW Offshore, Diamond Generating Europe and China Three Gorges. Moray East was awarded the rights to develop offshore wind in the outer Moray Firth as a development partner of The Crown Estate as part of the Third Round of Offshore Wind Licensing. The Moray East site is located on the Smith Bank in the outer Moray Firth. It is located 12 nautical miles (nm) (approx. 22km) from the Caithness Coast, covers an area of 86 square nautical miles or 295 square km, and ranges from 37 - 57 metres in water depth.

Moray East has undertaken the development of the Moray East site first, because of spatial constraints relating to the Moray West site. In the course of development of the Project, the Moray East site was further split into three wind farms as listed below:

- Telford Offshore Windfarm;
- Stevenson Offshore Windfarm; and
- MacColl Offshore Windfarm.

Moray East's intention is to develop and construct the Moray East site as a single offshore wind farm project (the Moray East Offshore Wind Farm) with a transmission entry capacity (TEC) of 900 MW and capacity of approximately 950 MW. The Wind Turbine Generators (WTGs) will be spread across the Telford, Stevenson and MacColl areas.

The Environmental Management Plan (EMP) is one of a number of documents produced by Moray East to meet the requirement of the Section 36 Consents and the Marine Licences.

Helping Moray East meet its environmental objectives, the EMP provides the overarching framework for environmental management during the construction and operation of Moray East Offshore Wind Farm and Offshore Transmission Infrastructure (OfTI) (together referred to as the Development).

The EMP is intended to be referred to by everyone involved in the construction and operation of the Development. Effective communication of its contents is key to successful implementation.

In addition to digital copies to be shared with all contractors, hard copies of this EMP are to be held in the following locations:

- Moray East's main office in Edinburgh;
- premises of the Site Contractors;
- all Site offices dealing with marine operations;
    - The Moray East Marine Coordination Centre (MCC) and
    - with the Ecological/Environmental Clerk of Works (ECoW(s)); and
- aboard any vessels carrying out the Works.

Moray East and Contractors shall produce and maintain their own EMP which meets the requirements of this document. It shall contain an overview of Environmental aspects, impacts and controls in place. Moray East and the ECoW will review the plans to ensure that the impact of construction and operation activities are reduced to As Low As Reasonably Practicable (ALARP).

In addition to its directors and managers, the Moray East team includes an ECoW, Fisheries Liaison Officer (FLO) and an archaeologist.

The hierarchy of compliance cascades from Moray East (Principal Contractor) to the Contractors and Subcontractors. Contractors and Subcontractors. Each is responsible for verifying the level of compliance of the one below in the hierarchy.

The chain of command On Site comes from the Principal Contractor, (who will always have overall day to day management control and will direct and instruct as appropriate) and down through contractors to any Subcontractors onboard. Masters remain in command of their own vessels but will be directed by the Principal Contractor where appropriate.

Moray East shall ensure that the EMP's contents are included in the inductions prior to people undertaking works On Site and supplemented by training and regular toolbox talks as appropriate.

The Moray East ECoW plays a key role in the delivery of the EMP. In fulfilling this role, the ECoW shall:

- establish direct contact with Contractors, Subcontractors, the Archaeological Consultant and the FLO when required;
- provide support to the Moray East Health, Safety, Security and Environment (HSSE) Department and Development Team and where required attend Project meetings;
- report directly to Marine Scotland – Licensing Operations Team (MS-LOT) on compliance with the EMP;
- provide input to inductions which will include communicating key messages of the EMP;
- work with contractors and Moray East HSSE to establish practical environmental communication and reporting protocols and that sufficient information for compliance reporting is acquired; and
- work with the Moray East Development Team to liaise with MS-LOT and other stakeholders on environmental management matters.

The Development have facilities for Marine Coordination and Emergency Response and will have facilities for Operations and Maintenance, which provide elements in support of the EMP.

Section 8 of the EMP contains the specific requirements and arrangements everyone must follow, including:

- transportation and supply of materials;
- substance deposits;
- chemicals;
- bunding and storage;
- waste management;
- site restoration;
- soil;
- marine animals;
- vessels;
- biosecurity;
- seabed impact;
- dropped objects; and
- archaeology and Unexploded Ordnance (UXO).

1 Introduction and Scope

1.1 Overview

This document has been prepared in compliance with the following consent conditions:

1. Consent condition 14 of the Section 36 Consents for Telford, Stevenson and MacColl offshore wind farms (the Section 36 Consents);
2. Condition 3.2.1.2 of the Modified Offshore Transmission Infrastructure (OfTI) Marine Licence (Number 05340/19/0) (the OfTI Marine Licence); and
3. Condition 3.2.1.2 of the Offshore Substation Platform (OSP) Marine Licence (Number 06347/19/0) (the OSP Marine Licence). The OfTI Marine Licence and the OSP Marine Licence are collectively referred to as the OfTI Licences.

This Environmental Management Plan (EMP) has been prepared with five aims:

- provide the overarching framework for environmental management during the construction and operation of the Telford, Stevenson and MacColl Offshore Wind Farms (which together will be developed as the Moray East Offshore Wind Farm) and Offshore Transmission Infrastructure (OfTI) (together referred to as the Development);
- address the specific requirements of the relevant conditions attached to Section 36 Consents and Marine Licences associated with the Moray East Offshore Wind Farm and the OfTI Licences;
- capture and communicate to all parties the environmental commitments made within the Moray East Environmental Statement (ES) (2012), the Modified Transmission Infrastructure ES (2014) and the Moray East OSP Environmental Report 2017 (together referred as the ESs) that must be followed during the construction and operation and maintenance phases;
- aid Moray East in meeting its own environmental objectives; and
- clarify the duties of the Principal Contractor and Contractors. It should be noted that the purpose of this document is not to establish any contractual distinctions between Moray East and its contractors on the responsibility for the provisions stated in the EMP.

It provides practical guidance to those involved in the Development - Moray East (Principal Contractor) personnel, Contractors, Subcontractors and the Ecological / Environmental Clerk of Works (ECoW) - on management of the potential environmental impacts and impacts associated with the construction and operation of the Moray East Offshore Wind Farm and Offshore Transmission Infrastructure (OfTI) (together referred to as the Development)The EMP also serves to provide to MS-LOT and stakeholders information in relation to environmental management and mitigation methods that will be implemented for the Moray East Project.

In doing so, it covers (in line with the requirements of Section 36 Consents and OfTI Marine Licence conditions, industry standards and good practice) the following:

- the roles and responsibilities of key Project personnel with respect to environmental management;
- mitigation measures to prevent significant adverse impacts to environmental interests, as identified in the ESs and pre-consent and pre-construction surveys, and included in the relevant parts of the Construction Method Statement (CMS);
- pollution prevention measures and contingency plans;
- management measures to prevent the introduction of marine invasive non-native species;
- measures to minimise, reuse, recycle and dispose of waste streams; and

- the reporting mechanisms that will be used to provide the Scottish Ministers and relevant stakeholders (including, but not limited to, Scottish Natural Heritage (SNH)[1], Scottish Environment Protection Agency (SEPA), Royal Society for the Protection of Birds Scotland (RSPB Scotland), Maritime and Coastguard Agency (MCA) and Northern Lighthouse Board (NLB)) with regular updates on construction activity, including any environmental issues that have been encountered and how these have been addressed.

The EMP will be updated prior to Final Commissioning of the Development and reviewed regularly over the lifespan of the Development.

All parties involved in the Moray East Project must apply the mitigation and management measures and procedures presented in this EMP. Compliance will be verified by Moray East using a series of performance monitoring measures (KPIs, Audits, Inspections, etc.), and non-compliance is addressed through its improvement management system (tracked, formal actions that address particular issues). The EMP is part of Moray East's Environmental Management System (EMS) and is one of the 'Support Documents' as illustrated in Figure 1-1 below:

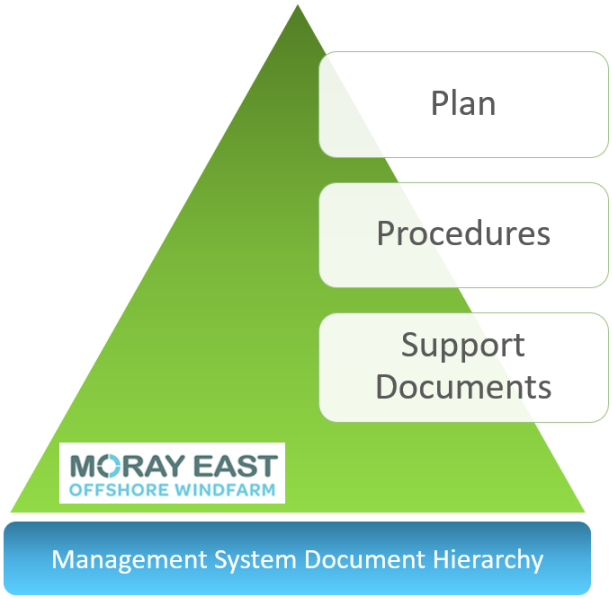

Figure 1-1: Management System Document Hierarchy

1.2 Scope of Application

The EMP applies to all construction activities required to be undertaken before the Final Commissioning of the Development and all activities required during the operational lifespan of the Development, from the Final Commissioning of the Development until the cessation of electricity generation.

Decommissioning is outwith the scope of this document and will be dealt with as part of a separate process that would include the creation of a new EMP and associated consultations.

This EMP applies to those representing Moray East (whether in its role as consent holder, licensee, client or other entity), and all other Contractors and subcontractors involved.

[1] Although the Joint Nature Conservation Council (JNCC) are named as consultee within the relevant EMP conditions, Moray East has been advised that the offshore renewable energy casework responsibility has been delegated from JNCC to SNH from 1st April 2017.

2 Document Structure and Reference Documents

After the introduction, references and context sections, the EMP structure, and all the information contained, is based on a standard management system cycle as shown in Figure 2-1 below:

Figure 2-1: Management System Cycle

Each section of the main document represents a part of the management cycle and includes information as set out in Table 2-1 the table below:

Table 2-1: Document Structure

Document Structure Overview	
Section	**Details**
Leadership (Section 5)	Provides information about: • environment policy • management commitment and responsibility • ownership of the EMP
Planning (Section 6)	Provides information about: • environmental objectives • environmental risk impacts and actions
Support (Section 7)	Provides information about: • resources: staff and contractors • roles and responsibilities • chain of command • competence and training • awareness • communication

Document Structure Overview	
Section	**Details**
Operation (Section 8)	Provides information about: • environmental management processes (mitigation, waste management, Marine Invasive Non-Native Species (MINNS), pollution etc.) • environmental management procedures environmental mitigation actions • any other environmental requirements
Performance Evaluation (Section 9)	Provides information about: • reporting Mechanisms • monitoring and measurement • audit • analysis and evaluation • management review
Improvement (Section 10)	Provides information about: • non-conformity and corrective action • continual improvement

2.1 Interfaces with other documents

The sections below illustrate the indicative relationship between the EMP, other Moray East documents and external documents e.g. those of the Government Agency.

2.1.1 *Moray East Environmental Management Plans*

The offshore works comprise one part of the Moray East development. Each part of the development has its own EMP which contributes to the overall approach to environmental management on the project. This document presents the EMP for offshore activities up to Mean High Water Springs only (MHWS).

Construction EMPs (CEMPs) relating to onshore works, one for the onshore substations and one for the onshore export cable route, were produced separately and approved by Aberdeenshire Council. The two onshore CEMPs submitted to Aberdeenshire Council incorporated EMPs for (1) the co-located New Deer and Moray East Substations, and (2) the Moray East Onshore Export Cable and the Moray East Landfall site and Transition Joint Bays (see Figure 2-2 below).

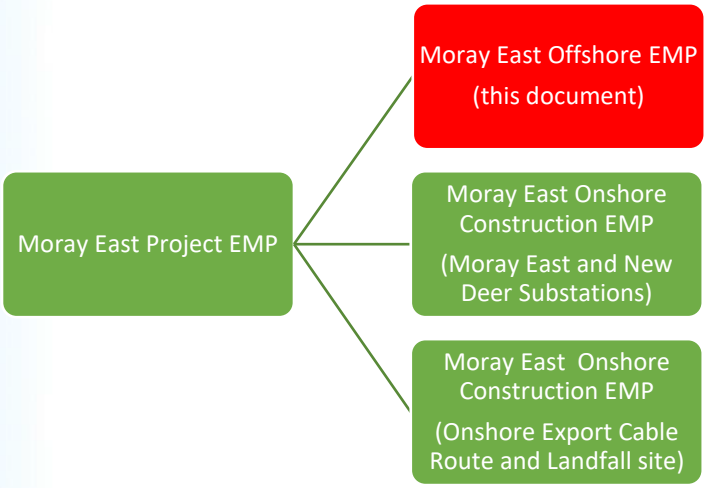

Figure 2-2: Environmental Management Plans

2.1.2 *Moray East Contractor Documents*

This EMP provides the over-arching framework for onsite environmental management and the Development shall be constructed and operated in accordance with this EMP. Moray East will confirm that all requirements of this EMP are included in the Contractor's EMP (and supporting documents), and that there are clear, practical instructions for their implementation, before the document is approved. This shall be done by the Moray East Head of HSSE.

3 Definition of Terms

The following terms and abbreviations are used in this document:

Table 3-1: Terms and Abbreviations

Term/Abbreviation	Detail
ADD	Acoustic Deterrent Devices
AFS	Anti-fouling system
AIS	Automated Identification System or Aeronautical Information Service
ALARP	As low as reasonably practicable
ANO	Air Navigation Order
ASMS	Active Safety Management System
AtoNs	Marine Aids to Navigation
BWM	Ballast Water Management (also refers to ballast sediment where appropriate)
CAA	Civil Aviation Authority
CaP	Cable Plan
CDM	Construction (Design and Management) Regulations
CEMP	Construction Environmental Management Plan
CFMS	Commercial Fisheries Mitigation Strategy
CFWG	Commercial Fisheries Working Group
CION	Connections Infrastructure Options Note
CMS	Construction Method Statement
Consent Conditions	The terms that are imposed on Moray East under the Section 36 Consents or OfTI Licences that must be fulfilled throughout the period that the Consent or Marine Licence is valid.
Contractor	Organisation working On Site
Corrective action	Action to eliminate the cause of a detected non-conformity.
COSHH	Control of Substances Hazardous to Health
CTG	China Three Gorges
CTV	Crew Transfer Vessel
DPR	Daily Progress Reports
Dangerous goods	Solids, liquids, or gases that can harm people, other living organisms, property, or the environment.
Development	The Moray East Offshore Wind Farm and the OfTI.
Distributed OSP	An offshore substation platform (OSP) which is a standalone modular unit that utilises the same substructure and foundation design as a wind turbine generator.
DPR	Daily Progress Report
ECoW	Ecological / Environmental Clerk of Works
EDA	Eastern Development Area
EIA	Environmental Impact Assessment

Term/Abbreviation	Detail
EMF	Electromagnetic Fields
EMMP	Environmental Mitigation and Monitoring Plan
EMP	Environmental Management Plan (this document)
EMS	Environmental Management System
Environment	Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelation.
Environmental aspect	Element of an organisation's activities, products or services that can interact with the environment.
Environmental impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.
Environmental incident	An undesired event with possible significant environmental impact(s) as a result.
ES	Environmental Statement
ERCoP	Emergency Response Cooperation Plan
ERP	Emergency Response Plan
ERT	Emergency Response Team
FIR	Fishing Industry Representatives
Final Commissioning of the Development/Works	The date on which all wind turbine generators forming the Development have supplied electricity on a commercial basis to the National Grid, or such earlier date as the Scottish Ministers deem the Development to be complete.
FLO	Fisheries Liaison Officer
HAZID	Hazard Identification Workshop
HCHET	Highland Council Historic Environment Team
HES	Historic Environment Scotland
HSE	Health, Safety and Environment
HSSE	Health, Safety, Security & Environment
IMO	International Maritime Organisation
ISO	International Organisation for Standardisation
Inter-array cables	The electrical cables that connect the WTGs to the Distributed OSPs
Induction	Formal introduction to the Moray East Project and associated safety, health and environmental requirements.
JNCC	Joint Nature Conservation Committee
KPI	Key Performance Indicator
Landfall site	The point above MHWS near Inverboyndie, where the OfTI cable connects to the OnTI.
Licensable Marine Activity	Licensable Marine Activity" means the activities listed in section 66 of the 2009 Act and section 21 of the 2010 Act
LMP	Lighting and Marking Plan
Licensee	The party named on the relevant Marine Licence

Term/Abbreviation	Detail
Marine Coordination	The management and surveillance of people, vessels and offshore structures to ensure the safe preparation and execution of offshore activities, in order to minimise the probability of an incident, and to provide effective response if an incident does occur
Marine Licences	The written consents granted by the Marine Scotland under the Marine (Scotland) Act 2010 and / or the Marine and Coastal Access Act 2009
MARP	Marine Archaeology Reporting Protocol
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
MFCFWG	Moray Firth Commercial Fisheries Working Group
MFRAG	Moray Firth Regional Advisory Group
MHWS	Mean High Water Springs
MCA	Maritime and Coastguard Agency
MCC	Marine Coordination Centre
MFOWDG	Moray Firth Offshore Wind Developers Group
MINNS	Marine Invasive Non-Native Species
MMO	Marine Mammal Observer
MORL	Moray Offshore Renewables Limited
Moray East	Moray Offshore Wind Farm (East) Limited
Moray East site	Area of the Telford, Stevenson and MacColl Offshore Wind Farm Sites which together will be developed as the Moray East Offshore Wind Farm
MPCP	Marine Pollution Contingency Plan (2019)
MRCC	Marine Rescue Coordination Centre
MS-LOT	Marine Scotland Licensing Operations Team
MSS	Marine Scotland Science
NLB	Northern Lighthouse Board
nm	Nautical Miles
NtM	Notice to Mariners
NSP	Navigation Safety Plan
ODS	Ozone-Depleting Substances
O&M	Operations and Maintenance
OfTI	The Offshore Transmission Infrastructure The OfTI includes the transmission cable required to connect the Wind Farm to the OnTI. This covers the Distributed OSPs and the cable route from the Distributed OSPs to Mean High Water Springs (MHWS) at the landfall near Inverboyndie.
OFTO	Offshore Transmission Owner
OMP	Operation and Maintenance Programme
OSP	Offshore Substation Platform
On Site	On Site means within the boundaries of the Wind Farm and OfTI as defined within the Section 36 Consents and the Marine Licences.

Term/Abbreviation	Detail
OnTI	The Onshore Transmission Infrastructure
PAD	Protocol for Archaeological Discovery
PAM	Passive Acoustic Monitoring
PEMP	Project Environment Monitoring Plan
PPP	Planning Permission in Principle
PS	Piling Strategy
Project	The Moray East Project comprised of the Moray East Offshore Wind Farm, the OfTI and the onshore transmission infrastructure
RA	Risk Assessment
RAMS	Risk Assessments Method Statement
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
RSPB Scotland	Royal Society for the Protection of Birds Scotland
Section 36 Consent	Consent under Section 36 of the Electricity for the construction and operation of an electricity generating station
SEPA	Scottish Environment Protection Agency
Site	The area in which the Moray East Offshore Wind Farm will be located
SNCBs	Statutory Nature Conservation Bodies
SNH	Scottish Natural Heritage
Subcontractor	Subcontractor to the Contractor
TEC	Transmission Entry Requirement
Toolbox talk	A short presentation given to Project team members on an aspect of health and safety, which also includes environmental management
TAR	Transportation Audit Report
UKHO	United Kingdom Hydrographic Office
VMP	Vessel Management Plan
Wind Farm	The Moray East offshore array development as assessed in the ES including wind turbines, their foundations, inter-array cabling and meteorological mast.
WMP	Waste Management Plan
WNoO	Weekly Notice of Operations
Works	All items to be installed as part of the Development.
WSI	Written Scheme of Investigation
WTG	Wind Turbine Generator

4 Context – Project details and legal framework

This section provides the essential context and background in which the EMP is implemented.

4.1 Project Description

The Moray East Offshore Wind Farm is being developed by Moray Offshore Windfarm (East) Limited (Moray East), a joint venture partnership between OceanWinds Offshore, Diamond Generating Europe and China Three Gorges (CTG). Moray East was awarded the rights to develop offshore wind in the outer Moray Firth as a development partner of The Crown Estate as part of the Third Round of Offshore Wind Licensing.

The Moray East site is located on the Smith Bank in the outer Moray Firth. It is located 12 nautical miles (approx. 22 km) from the Caithness Coast, covers an area of 281 square nautical miles or 520 square km, and ranges from 37 m – 57 m in water depth.

Moray East has undertaken the development of the Moray East site first because of spatial constraints relating to the Moray West site. In the course of development of the Project, the Moray East site was further split into three wind farms as listed below:

- Telford Offshore Windfarm;
- Stevenson Offshore Windfarm; and
- MacColl Offshore Windfarm.

Moray East is constructing the Moray East site as a single offshore wind farm project (the Moray East Offshore Wind Farm) with a transmission entry capacity (TEC) of 900 MW and capacity of approximately 950 MW. The Wind Turbine Generators (WTGs) will be spread across the Telford, Stevenson and MacColl areas. A layout map showing the location of the WTGs is shown in the Moray East Development Specification and Layout Plan (DSLP).

Moray East has been offered a connection to transmission system via infrastructure, owned and operated by Scottish Hydro-Electric Transmission (SHE-T), at a connection point located south of New Deer in Aberdeenshire.

Moray East is constructing the transmission infrastructure that is required to connect the Wind Farm to the National Grid. Moray East will transfer the transmission assets to an Offshore Transmission Owner (OFTO) who will manage the transmission infrastructure.

A planning application was submitted in June 2014 to Aberdeenshire Council for the onshore elements of the transmission infrastructure (OnTI) (onshore export cable and two onshore substations). The inclusion of a second substation within the planning application was required for the regional Transmission Owner (Scottish Hydro Electric Transmission (SHE-T)), in order for Moray East to connect into the existing 275 kV overhead line. Moray East obtained all necessary planning approvals for the onshore substation on behalf of SHE-T and carried out the civil works for both substations but will hand over the SHE-T site for all construction and commissioning activities thereafter. Planning Permission in Principle (PPP) was granted in September 2014 and a Section 42 consent to vary the PPP was granted in 2015. Approvals of information submitted to address the matters specified in the conditions were received in June 2018.

A Marine Licence application was also submitted to Marine Scotland for the offshore elements of the OfTI (OSP(s), OSP interconnector cables and offshore export cables) in April 2014. The Marine Licence was granted in September 2014. An application for a Marine Licence for two additional Distributed OSPs was submitted in May 2017, awarded in September 2017 and varied in July 2019. These Marine Licences are referred to as OfTI Licences.

A map of the Development (Moray East site and OfTI Corridor) is included within Figure 4-1 below.

Figure 4-1: Geographical Location of the Development (Moray East site and OfTI Corridor)

4.2 Legal Context

A range of environmental related legislation applies to the Project covering:

- Section 36 Consents and Marine Licences;
- OfTI Marine Licences
- Environmental Impact Assessment;
- waste and discharges;
- decommissioning;
- physical presence; and
- pollution control.

Consent/Licence compliance and wider environmental legal compliance are discussed in Section 9.5 .. A summary table explaining where the EMP addresses Consent and Licence conditions is presented in Appendix VI.

4.3 Document Control

This EMP is a 'live document' and will be revised as relevant to ensure the information is kept up to date. Linkages exist between a number of offshore consent plans as highlighted within Appendix VI. As plans are updated there will be a review of inter-linkages with other consent plans to ensure these are also updated as relevant. The document is controlled via Viewpoint For Projects, an electronic document management system, and the Head of Health, Safety, Security and Environment (HSSE) has ultimate responsibility for ensuring that HSSE related documents are revised in accordance with the relevant timescales.

5 Leadership and Commitment

This section presents the details considering policy, leadership and commitment relevant to the EMP.

5.1 Project Policy

The Moray East Quality and HSE Policy Statement applies to all work on the Project and is the governing policy for this document. It is included in Appendix I.

5.2 Leadership

Leadership is the defining element of the Moray East EMS and is essential to the successful implementation of this plan.

Leadership and management overlap but are not the same thing. Staff in senior management positions have a significant role to play, however it is expected that every individual demonstrates environmental leadership in the context of their role.

All involved are empowered and expected to raise environmental concerns about the Works or highlight opportunities for improvement.

5.3 Responsibilities for Management of the Plan

The responsibilities for the production and maintenance of the EMP are presented in **Table 5-1** below:

Table 5-1: Management Responsibilities

Role	Responsibility
Moray East Project Director	Approval
Moray East Head of Construction	Approval
Moray East Head of Development	Approval
Moray East Offshore Consents Manager	Review
Moray East Ecological / Environmental Clerk of Works	Review
Moray East Head of HSSE	Writing

This document is maintained live and changes will be made and new revisions issued as required (see Section 9).

5.4 HSE Charter

Moray East has prepared a Project Health, Safety and Environment (HSE) Charter, to which all staff commit. It summarises the company's core HSE values and describes the behaviours it expects all to show. This is included in Appendix II.

Contractors shall be required to be aware of the Moray East Project HSE commitments and sign an acknowledgement of compliance with the Moray East Project HSE Charter.

5.5 Empowered to 'Stop the Job'

In line with the policy, the HSE Charter and industry practice, all working on the Project (staff and Contractors) are empowered to 'stop the job', if they believe there is an immediate risk of harm to people or the environment.

5.6 HSE Observations

As another demonstration of leadership, Moray East promotes the use of HSE observations via the My Compliance app which allows MOWEL personnel to easily input HSE observation cards from their phone or PC. If on a Contractor site, both Moray East and Contractor personnel shall use the Contractors observation system, describing an issue which arose, the discussion they had about it and how it was resolved. These are to be discussed with Moray East for assessment, review, action and trend analysis.

This is to encourage a culture of openness and proactivity and ensure that conditions and acts which could cause harm to people or the environment are understood and rectified, and that positive behaviours are recognised.

6 Planning

This section presents the details concerning Moray East's environmental objectives, the risks to meeting those objectives and the actions taken.

6.1 Objectives

Based on a combination of the Quality and HSE Policy, the organisational context, the Environmental Statement (ES)s and the output of hazard identification processes, Moray East has the following Environmental Objectives:

- zero spills to sea;
- zero high potential incidents;
- all personnel working on the Project shall have a Risk Assessment (RA) for every task, which addresses environmental impact; and
- compliance with all applicable legislation, licences and conditions.

6.2 Contractor Objectives

Contractors are required to produce and adhere to their own environmental objectives for their scope of work. Targets would be equal to those set by Moray East as a minimum.

6.3 Environmental Management Plans - Aspects and Impacts

As stated in the Introduction at Section 1 , an aim of this plan is to help Moray East meet its environmental objectives (as set out in Section 6.1). It describes the main Environmental aspects, the associated impacts and the planned controls (mitigation / prevention actions).

The Contractorsshall produce and maintain their own EMP which meets the requirements of this document. It shall contain an overview of Environmental aspects, impacts and controls as set out above. Moray East and the ECoW will review the plans to ensure that the impact of construction and operation activities are reduced to ALARP.

6.4 Opportunities

In addition to considering impacts and mitigation, communication of lessons learned and best practice will be integral to the working culture On Site. All personnel shall share any opportunities for improvement in environmental performance, either through observation cards, tool box talks, or other processes as appropriate.

7 Support

This section explains the organisational structure of the Project and defines individual roles and responsibilities. It also describes how Moray East ensures competent people are working on the Project and what sort of training and communication takes place.

7.1 Resources

This section sets out the resources working on the Project and how they are structured.

7.1.1 *Moray East Resources*

The main Moray East resources provided in support of this EMP, and the hierarchical relationships are presented in Figure 7.1**Error! Reference source not found.** below.

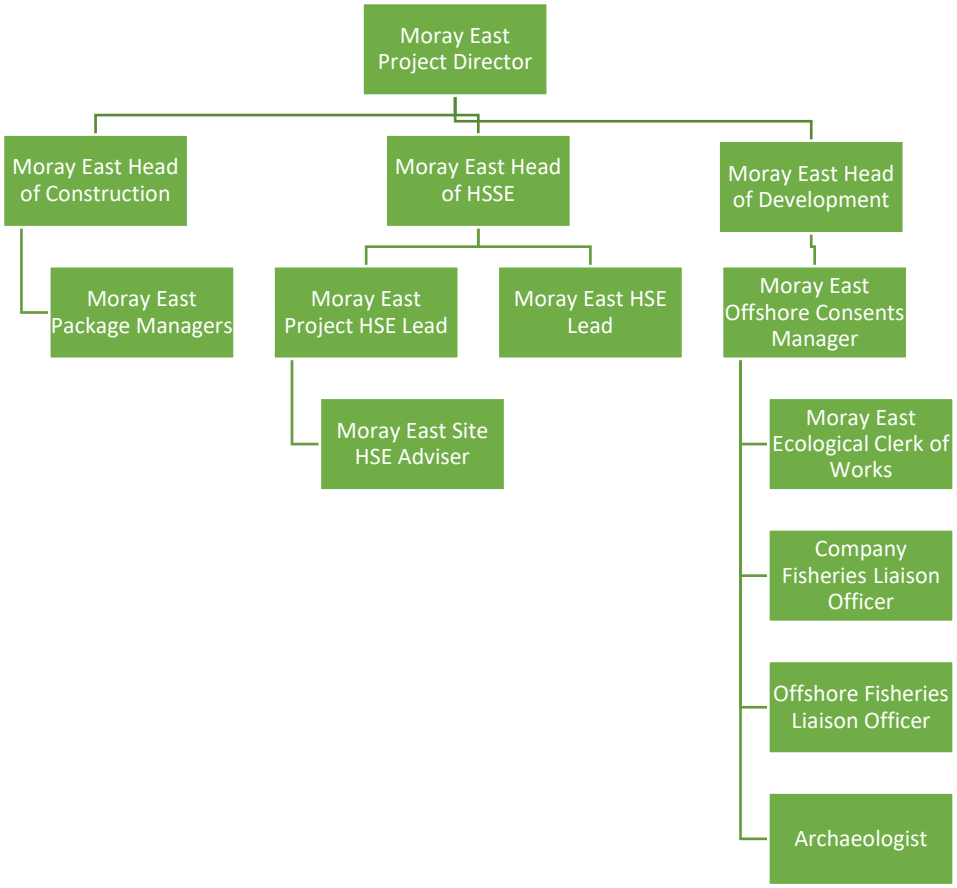

Figure 7-1: Organogram

7.1.2 *Project Construction Organogram*

The chain of command On Site comes from Moray East and down through Contractors to any Subcontractors onboard. Masters remain in command of their own vessels but will be directed by Moray East where appropriate.

The hierarchy of compliance cascades from Moray East down through the contracting/subcontracting organisations. Each is responsible for verifying the level of compliance of the one below in the hierarchy.

7.2 Responsibilities under the EMP

This section provides high-level details on what Moray East, Contractors and third parties' responsibilities are under the EMP (see Table 7-1 and Table 7-2 below).

Table 7-1: Moray East Responsibilities

Role	Responsibility under the plan
Moray East	Moray East has overall responsibility for the EMP and compliance.
Moray East Project Director	Approval of the EMP. Responsible for ensuring that sufficient resources and processes are in place to deliver / comply with the EMP.
Moray East Head of Construction	Approval of the EMP; Responsibility for ensuring requirements of EMP are cascaded to Contractors; Addressing Moray East and Contractor non-compliance; and Responsibility for ensuring management arrangements are in place for Moray East and Contractors.
Moray East Head of Development	Approval of the EMP. Reporting to / advising Moray East, the Project Director and Moray East Board in relation to consenting related matters arising from the requirements of the EMP. Ensure provision of resources from the Development Team to support the Moray East Head of HSSE in the review of relevant Contractor documentation in line with this EMP and the ES commitments. Where necessary, reporting to Marine Scotland Licensing Operations Team (MS-LOT) and other stakeholders including Moray Firth Regional Advisory Group (MFRAG) on compliance with the EMP and response to any environmental incident.
Moray East ECoW	Quality assurance of final draft version of the EMP and other related consent documents. Provide advice to Moray East on compliance with Consent Conditions including attendance at Project meetings where required. Review of contractor documentation including EMPs and RAsto ensure compliance with this EMP. Monitor and report on compliance to Moray East and MS-LOT. Help induct On site personnel on Site / works environmental policy and procedures; Direct liaison with MS-LOT, MFRAG, statutory bodies and stakeholders (including Beatrice Offshore Windfarm Ltd (BOWL)). Liaison with other ECoWs including the BOWL ECoW. Inclusion in Emergency Response Team (ERT) for any environmental incidents. Authority to halt or suggest modifications to activities that would lead to non-compliance – provided that there are no overriding health and safety reasons for continuing with the activity and to be discussed with the Moray East Development team and authorised by the Moray East Project Director.

Role	Responsibility under the plan
Moray East Head of HSSE	Writing and maintenance of the EMP. Ensure environmental impacts from installation works are reduced to As Low As Reasonably Practicable (ALARP) and ensure that Contractor's RA are reviewed. Ensuring management arrangements are in place for Moray East and Contractors Legal compliance reviews. Ongoing Project environmental performance monitoring. Reporting of incidents. Complete a pollution incident report for all spillages. Onshore emergency response coordination. Improvement management.
Moray East Project HSE Lead	Day-to-day contact with Contractors. Collation of performance data. Inspection and audit. Incident investigation. Moray East focal point for deposits, chemicals, transport, waste, and equipment. Emergency response Liaison with Marine Coordination Centre (MCC).
Moray East HSE CDM Lead	Support with any ongoing design process and ensuring environmental impacts are addressed.
Marine Warranty Surveyor and any other Vessel Auditors	Assessment of vessel biosecurity arrangements.
Marine Coordinator	Management of movement of vessels.
Emergency Response Team	Support offshore pollution control in the event of an environmental incident.
Permit to Work Coordinator	Day-to-day issuing of work permits and oversight of live risk profile (including environmental impact) from all ongoing work.

Table 7-2: Contractor Responsibilities

Role	Responsibility under the plan
Contractor	Prepare their own EMP in line with the requirements of the Moray East EMP. Ensure that their own procedures, and those of any Subcontractors encompass and fully discharge the mitigation and management measures and commitments presented in this EMP. Implementation of own environmental procedures. Ensuring that any corrective actions arising from environmental audits are addressed. Ensuring that provision is made for environmental management issues to form part of construction progress meetings and Project inductions. Ensuring that all construction personnel and Subcontractors assist and support the ECoW where required, for example during on-site monitoring and audits. Ensure environmental impacts from works are reduced to ALARP. Responsible for ensuring that sufficient resources and processes are in place to deliver/comply with the EMP and manage potential environmental impacts. Reporting as per the EMP. Responsible for implementing and discharging the required mitigation (control) measures On Site. Review task specific Method Statements and RAs to ensure consistency and compliance. Responsible for the dissemination of information from the Moray East management team or ECoW to anyone working on or visiting On site. Producing and maintaining records of activity On Site and communicating those to the ECoW to enable reporting of compliance to MS-LOT. Liaising with the Fisheries Liaison Officer (FLO) and Moray East ECoW and facilitating the ECoW in the fulfilment of their responsibilities including securing compliance with halt notices or amendments to CMS where approved by the Moray East Project Director.

7.2.1 *Moray East Project Staff Environmental Competence*

Moray East provides environmentally competent staff in support of the Project. This is achieved through the implementation of the Moray East competency management procedure.

All Moray East Project roles are allocated a series of competency requirements (skills knowledge and experience), people are matched to those roles based on the extent to which they meet those requirements. On an annual basis, the Moray East Head of HSSE and HR Manager take the results of ongoing performance and potential appraisal processes and conduct a gap analysis. This gap analysis forms the basis of ongoing training. Environmental competency and training is part of this. The output of this forms the Project training matrix, which includes eEnvironmental competency requirements for designated roles.

7.2.2 *Moray East Contractor Environmental Competence*

Moray East assesses overall competence and suitability of all contracted (individual and organisations) prior to working on the Project.

Moray East shall always ensure that the Contractors have sufficient resources of the required competence to meet the contractual and environmental requirements. The Contractors complete a prequalification

HSE questionnaire and are subject to ongoing performance review and periodic reassessment depending on the duration of their scope of work. As part of that, they have to demonstrate that they operate an EMS appropriate to their scope of work. International Organisation for Standardisation (ISO) 14001 is used as a benchmark, but if a Contractor can justify an alternative, but equivalent, standard, then this may be accepted. They must also maintain the status of their EMS for the duration of the Works.

Where the Contractors have a change in an individual performing a significant environmental role (e.g. construction manager), Moray East will request evidence that the Contractor has undertaken a review of their environmental competence for that role.

7.2.3 *Moray East Subcontractor Competence*

All Moray East's Contractors are required to have a system in place that ensures any Subcontractors appointed are competent to perform their scope of work. Evidence that this system is in place and fit for purpose will be provided to Moray East on request and this system shall be audited by Moray East on a six-monthly basis.

7.3 Training

7.3.1 *Induction Requirements*

Moray East shall ensure that the EMP's contents are included in the inductions prior to people undertaking works On Site.

Moray East and Contractors shall ensure that all employees, Subcontractors, suppliers, and other visitors to the Site are made aware of the content of this document that is applicable to them. This may be delivered as part of a larger Site induction. The induction process shall include an assessment to verify that key information has been successfully conveyed to inductees. Moray East shall audit this at least once annually (Section 9.4 below).

Regular updates On Site or task specific environmental commitments shall be undertaken through the use of toolbox talks.

Inductions to the Site shall include (as a minimum):

- identification of specific environmental impacts associated with the work to be undertaken On Site by the inductee;
- identification of specific environmental impacts which relate to specific areas of the Site;
- any Site, time or task specific mitigation that is required in order to comply with commitments made in the ES, subsequent plans or other consent documents;
- summary of the main environmental impacts at the Site as identified during the pre-construction surveys;
- role of the ECoW and contact details;
- Environmental incident and emergency response procedures; and
- any other relevant information.

The induction contents shall be shared with Moray East and the ECoW for comment prior to Works starting for review and input. The ECoW may request to be involved in the delivery.

7.3.2 *Toolbox Talks*

Moray East and Contractors shall deliver toolbox talks on environmental matters on a regular basis (schedule to be stated within their EMPs, but no less than monthly – the frequency will be much higher

at the start of the work, and similarly peak during times of significant changes of personnel). A record of all Toolbox talks, their content and the attendees will be maintained and recorded.

The ECoW shall support the delivery of Toolbox talks and provide specialist input as required/requested.

Where there has been a problem or deterioration in environmental performance, Moray East and Contractors shall increase the frequency of toolbox talks.

7.3.3 *Environmental Training*

Moray East shall deliver environmental awareness training as part of its in-house training programme.

Contractors shall prepare a full schedule of training (timing and content) and include this in their EMPs.

The provision of environmental training will be audited on a regular basis (see Section 9.4).

7.4 Communications

This section explains the opportunities for sharing and communicating environmental information.

7.4.1 *EMP Distribution*

This EMP is intended to be referred to by everyone involved in the construction and operation of the Development. Effective communication of its contents is key to successful implementation.

In addition to digital copies to be shared with all contractors, hard copies of this EMP are to be held in the following locations:

- Moray East's main project office in Edinburgh;
- premises of the site Contractors;
- all site offices dealing with marine operations;
    - the Moray East MCC;
    - with the ECoW(s); and
- aboard any vessels carrying out the Works.

All personnel will be informed of the EMP, its function and where to access copies at the Site induction. Contractors will be required to be familiar with the EMP and formally submit an acknowledgement of its contents to Moray East prior to starting works On Site.

7.4.2 *Moray East Internal Communications*

There is a range of opportunities for the exchange and sharing of Project environmental information. These include:

- Project and company inductions;
- Moray East Project Meetings – HSSE is a fixed agenda item;
- Moray East HSE Meetings – Moray East holds regular HSE-specific meetings with staff to ensure that people can raise concerns and get feedback on ongoing matters;
- Site Meetings – HSSE is a fixed agenda item;
- monthly Contractor meetings – HSSE is a fixed agenda item;
- monthly HSE Promotions – every month there is a fresh HSE theme for promotion and discussion;

- monthly HSE Reports – every month a full report of all Project HSE leading and lagging indicators is prepared and shared with the team; and
- task/area specific HSE Toolbox talks – these will be held before tasks with specific HSE and/or mitigation are undertaken.

7.4.3 *Moray East ECoW and Communications*

The ECoW plays a key role in the delivery of the EMP. In fulfilling this role, the ECoW shall:

- establish direct contact with Contractors, Subcontractors, the Archaeological Consultant and the FLO when required;
- provide support to the Moray East HSSE Department and Development Team and where required attend Project meetings;
- report directly to MS-LOT on compliance with the EMP;
- provide input to inductions which will include communicating key messages of the EMP;
- work with contractors and Moray East HSSE to establish practical environmental communication and reporting protocols and that sufficient information for compliance reporting is acquired; and
- work with the Moray East Development Team to liaise with MS-LOT and other stakeholders on environmental management matters.

In practice the ECoW will spend time On Site (e.g. ports, harbours and offshore) as required and will be available to all involved when needed when not On Site. They will be in regular contact with the Moray East Client Representatives offshore.

The ECoW will establish communication channels with key personnel, including Moray East HSSE team, MCC, onboard client representatives, FLO, Archaeologist, and Contractors (as appropriate). The ECoW will be available to support these teams as required.

7.4.4 *Moray East External Communications*

Table 7-3 below sets out the arrangement that will be used to provide the Scottish Ministers and relevant stakeholders (including, but not limited to, SNH[1], SEPA, RSPB Scotland, MCA and NLB) with regular reporting on construction activity, including any environmental reporting data and any issues that have been encountered, and how these have been addressed.

Table 7-3: External Communications

Subject	Proposed Frequency	Relevant Stakeholders
ECoW compliance reporting, including construction progress and agreed environmental reporting criteria.	Monthly Reporting	MS-LOT
Moray East Project and ECoW Meetings with MS-LOT	As Required	MS-LOT
Moray East consenting updates	As Required	MFRAG and other key stakeholders
Persons acting on behalf of the Licensee	As Required	Keeping Mariners Informed and webpage for members of public
Vessel Reports	As Required	Keeping Mariners Informed and webpage for members of public

Subject	Proposed Frequency	Relevant Stakeholders
Incident reporting (including accidental discharge of pollutants)	As Required	MS-LOT and MCA
Dropped objects reporting	As Required	MS-LOT/MCA/Kingfisher at Seafish/NLB/United Kingdom Hydrographic Office (UKHO)/Navigational Warnings/ Scottish Fishermen's Federation(SFF)
Planned discharge of chemicals (if required)	As required (in advance of discharge)	MS-LOT
Force Majeure, as defined under Section 9.6.1 of this EMP	As required	MS-LOT
Transportation Audit Report (TAR)	Monthly	MS-LOT
Moray Firth Offshore Wind Developers Group – Commercial Fisheries Working Group (MFOWDG-CFWG)	As required	MS-LOT/ Marine Scotland Science (MSS)/MS Policy/SFF
Notice to Mariners (NtM)	Fortnightly	Kingfisher Bulletins, Local NtM and Keeping Mariners Informed and webpage for members of public
Weekly Notice of Operations (WNoO)	Weekly	Keeping Mariners Informed and webpage for members of public

7.4.5 *Moray East and Contractor Communications*

During the Works, HSSE, is a standing item in all Project meetings, and is part of established daily reporting when offshore.

Moray East has client representative(s) on each of the construction vessels. The offshore client representative(s) will be responsible for providing daily progress reports to the Moray East HSSE department, the Moray East Development Team and the ECoW (who would then ensure that MS-LOT received details as appropriate).

Full monthly reporting requirements for Contractors are included in Section 9.

Contractors shall define their arrangements (schedule, frequency etc.) for this in their respective EMPs.

8 Operation – Environmental Requirements, Procedures and Guidance

This section explains what Moray East expects and what everyone (Moray East staff and Contractors) must do concerning operational environmental matters. It applies to both the construction and Operations and Maintenance (O&M) phases.

8.1 Environmental Management System

The Moray East EMS applies to all activities under its direct control.

The Contractors working on the Project shall have an EMS appropriate to their scope of work. These systems shall be audited by the Moray East HSSE department at an agreed frequency. This section includes some of the main principles from the EMS.

8.1.1 *Permit to Work System*

Moray East deploys a permit to work system to control and monitor the work activities. This is done using the *Engica Q4* web based system. The system is operated from the MCC *and* is in place to ensure concise planning and risk assessment of tasks, which also includes Environmental Impact Assessment (EIA).

8.1.2 Risk *Assessment and Method Statements*

The Contractors shall have a method for the identification, assessing, controlling and monitoring risks to environment associated with their scope of work.

As a minimum, Contractors will be required to undertake a risk assessment for each specific task. The risk assessment will identify any potential environmental hazards associated with the Works and, where appropriate, will ensure that suitable mitigation is identified and communicated to reduce the risk.

The findings from any risk management and assessment process (in particular, the controls required) shall be communicated to those affected by activities. These should be used in the development of method statements and any procedures necessary, and appropriate to the scope of work being done.

The level of risk assessment shall reflect the level of complexity and risk associated.

8.1.2.1 HAZID

In addition to any general risk assessments, the Contractors shall also conduct Hazard Identification Workshops (HAZID) for key phases which consider the potential for environmental risks.

These shall be of an equivalent standard to the Moray East HAZID Procedure. The basic elements are:

- select chair;
- define scope and terms of reference;
- provide background reading:
    - drawings and maps;
    - manuals and procedures;
    - bills of quantities;
    - scopes of work;
    - contracts and memoranda of understanding; and
    - existing design files and risk registers;
- choose attendees;
- apply HAZID checklist; and

- document hazards identified.

The Moray East Project HSE Lead and ECoW shall be included in the HAZIDs.

8.1.3 *Design*

Although this EMP covers the construction and O&M phases, there is always the potential need for design work to address snagging issues, technical problems, etc.

The Principal Designer and Contractors shall ensure that their design process is compatible and aligns with the Moray East ALARP design procedure, and that environmental impact (and any specific Licence / Consent Conditions) are considered early in the design process and are compliant with the ESs (undertaken for the Telford, Stevenson and MacColl Offshore Wind Farms and separately for the OfTI) and reports provided for the discharging of Consent Conditions. They shall work with the Moray East Project HSE Manager and HSE Design Manager in doing so. The ECoW will be available to provide support when considering the compliance of any design changes.

8.1.4 *Management of Change*

Change is an expected event in the Moray East Project.

Change may include changes in technical design or approach, use of alternative equipment or work methods and changes in personnel.

Moray East's management of change procedure (which mandates an assessment of environmental impacts of any proposed change) shall apply to all aspects under its control.

Contractors shall ensure that their management of change process includes an assessment of the potential environmental impact. For changes which deviate from methods communicated in consent documents the ECoW will be informed and where appropriate MS-LOT will be consulted on changes.

8.1.5 *Environmental Document Control*

This EMP and all Moray East environmental documents shall be developed, reviewed, issued, controlled and stored according to the Moray East document development procedure. Moray East Head of HSSE will have responsibility for communicating changes in environmental documents to the ECoW and Contractors. Moray East and the Contractors shall ensure that any official environmental documentation that they produce is managed as part of a formal document control process. The Contractors will be responsible for ensuring all relevant site personnel are aware of changes in environmental procedures or mitigation which affects work On Site.

8.1.6 *Environmental Records Management*

Any hard copy environmental records produced on the Project shall be scanned electronically and stored in Viewpoint (Moray East's online data management programme), and the originals sent to the Moray East Project office in Edinburgh, or O&M base, for hard storage.

As part of ongoing performance monitoring (see Section 9), the Moray East Head of HSSE will be responsible for checking, reviewing and requesting clarifications on all day-to-day information and records generated for compliance reporting.

8.2 Marine Coordination Centre

Moray East's MCC, and O&M base is located in Fraserburgh. The MCC has been operational since the start of the offshore construction activities (May 2019) and is manned 24 hours, 7 days per week.

The MCC, through its role in management of the movement of vessels and emergency response, will be a significant practical resource in the implementation of this EMP.

The Contractors' vessel activities shall be overseen and coordinated by the MCC as per the following procedures:

- permission for construction vessels to enter the construction area and safety zones will be managed by the MCC, using the permit to work system in accordance with the permit to work procedure;
- the MCC will route vessels to an agreed location or berth/anchorage;
- the MCC will constantly monitor vessels and personnel via communication with vessels and Automated Identification System (AIS) for any potential vessel access conflicts. The MCC will also detect and monitor unauthorised vessels;
- the MCC will define safety zones, no-go locations etc;
- the MCC will obtain and provide localised weather information for vessels working on the Development to plan the work being undertaken;
- the MCC will be the central contact point for Contractors in case of an emergency, they will maintain a copy of the Moray East Emergency Response and Cooperation Plan (ERCoP); and
- the MCC will issue Notice to Mariners (NtMs) received from contractors after being reviewed and approved by Moray East.

Further details are included in the Vessel Management Plan (VMP) and Marine Pollution Contingency Plan (MPCP).

8.3 Emergency Response Team

There shall be an ERT for the Project. Guard Vessels, Crew Transfer Vessels (CTV's) and other construction vessels are equipped with pollution response and safety equipment and will be available to respond to any incident, the ERT will support the implementation of this EMP.

The ERT for the Project will be located in the MCC (initial contact) and the Project office in Edinburgh.

The ERT shall supplement any arrangements the Contractors have onboard vessels and structures, who shall include them in their emergency planning.

The ERT will liaise directly with the Marine Coordinator who would have responsibility for contacting the Moray East Emergency line on 0800 124 4957. Specific names, numbers, etc. are included in formal communications workflows in the ERCoP.

The MCC will be notified of any incidents immediately. The MCC will categorise the incident and communicate with the HSE team, the Moray East Development Team and the ECoW and where appropriate to the Crisis Management Team (CMT).

Further information on the pollution management is provided in the MPCP

8.4 Operations and Maintenance Base

The O&M base is located in Fraserburgh and houses the MCC.

The MCC will support the Works by providing a logistical option for transportation of materials and personnel. It is a significant resource in the implementation of the EMP.

The Contractor's HSE activities shall comply with any of the MCC requirements and instructions on a daily basis e.g. use defined lay down areas for waste or chemicals. Standard operating procedures On Site will comply with industry standard guidelines as well as any specific mitigation outlined in consent documents.

The Contractors shall ensure that they share environmental records with Moray East as required.

8.5 Subject-Specific Requirements

8.5.1 *Transportation Audit Reports (TARs)*

Moray East and Contractors must complete the Moray East TAR for each calendar month during the period when construction of the Works is undertaken.

The TAR (included in Appendix III) must be submitted within 14 days of the end of each calendar month and include information on:

- the nature and quantity of all substances and objects deposited on the seabed and materials used in construction in each calendar month.

Moray East will collate the TAR data and the ECoW will submit to MS-LOT.

If Moray East or Contractors become aware of any substances or objects on the TAR that are missing, or an accidental deposit occurs (see Section 8.6.6), they shall inform the Moray East Project HSE Manager and MCC immediately.

Moray East shall contact MS-LOT as soon as practicable including the dropped objects form in correspondence (see Section 8.6.6) after becoming aware, for advice on the appropriate remedial action.

Should MS-LOT deem it necessary, Moray East or the Contractors may be required to undertake a side scan sonar survey in grid lines (within operational and safety constraints), across the area of the Works to include cable routes, and any vessel access routes from local service port(s) to the Site to locate the substances or objects. If MS-LOT is of the view that any accidental deposits associated with the construction of the Works are present and that they require them to be recovered, then, subject to risk assessment, the deposits shall be removed by Moray East or the Contractors.

8.5.2 *Chemicals*

Moray East shall ensure that all chemicals which are to be utilised in the Works have been approved in writing by MS-LOT prior to use.

The Contractors shall provide to the Moray East Project HSE Manager and the development team a comprehensive list of all chemicals to be used in the Works (prior to each phase of the Works. Any additional chemicals / amendments to the list will be sent to MS-LOT for approval prior to them being used.

Control of Substances Hazardous to Health (COSHH) arrangements and requirements are addressed in Project safety plans.

Further information on the pollution management is provided in MPCP.

8.5.3 *Bunding and Storage*

The Contractors shall ensure suitable bunding and storage facilities are employed to prevent the release of fuel oils, lubricating fluids associated with the plant and equipment into the marine environment.

Requirements for bunding and storage is written into the Risk Assessments Method Statement (RAMS), and the and Contractors' own EMPs. This will primarily apply to the storage of fuel for CTV's at the quayside.

8.5.4 *Waste Management*

The Contractors shall ensure that any debris or waste material generated during the construction and operation of the Works is removed from the Site, as soon as is reasonably practicable, for disposal at a location approved by the relevant enforcement agencies.

They shall also ensure that all substances and objects deposited during the execution of the Works are inert (or appropriately coated or protected so as to be rendered inert) and do not contain toxic elements which may be harmful to the marine environment, the living resources which it supports or human health.

In support of the above requirements and all other waste matters, the Contractors shall produce a Waste Management Plan (WMP) as appropriate to their scope of work. The ongoing implementation of these plans shall be audited by the Moray East Project HSE Lead or the Site HSE Adviser.

Minimum contents required include:

- introduction, summary and regulatory overview;
- roles and responsibilities;
- waste arisings:
    - waste types;
    - inert waste;
    - general non-hazardous waste;
    - hazardous waste;
    - estimated waste arisings;
- waste management:
    - waste hierarchy;
    - prevention;
    - re-use;
    - recycling;
    - disposal;
    - measures for storage, segregation and handling of waste; and
- registered carriers.

The Contractors shall inform the Moray East Project HSE Manager of any deviation from their WMP within 24 hours.

8.5.5 *Site Restoration*

The Contractors shall ensure that if the Works are to be discontinued prior to completion, all reasonable, appropriate and practicable steps are taken to restore the Site to its original condition before any Licensable Marine Activity authorised under licence was undertaken, or to as close to its original condition as is reasonably practicable, to the satisfaction of MS-LOT.

Although an unlikely scenario, should the Works be discontinued, the Contractors shall work with Moray East to plan the restoration in such a way as to minimise environmental impact.

8.5.6 *Soil*

Moray East and Contractors shall ensure that if oil-based drilling muds are utilised, they are contained within a zero-discharge system. Any drill cuttings associated with the use of water-based drilling muds situated within the outer boundary of the Works need not be removed from the seabed.

If not previously agreed in the Contractors' own construction method statements, Contractors shall inform the Moray East HSE Manager if there is any potential for using oil-based drilling muds, or producing drilling cuttings, before any such work is approved or goes ahead.

8.5.7 *Marine Animals*

The following separate documents have been prepared to directly or indirectly, manage and mitigate the effects on marine animals:

- Piling Strategy (PS);
- VMP; and
- Cable Plan (CaP) - Wind farm and OfTI.

The content is not reproduced here, but the Contractors shall be provided with copies of these documents and will be required to be compliant with their contents.

8.6 Vessel-related Requirements

8.6.1 *General*

Moray East requires that all construction and operational vessels meet the required, recognised standards and will comply with the international maritime rules (as adopted by the relevant flag state) and regulations.

Moray East will conduct independent vessel suitability surveys on construction and operational vessels as necessary to check that they meet these standards and are appropriate for the purpose of their prescribed roles.

Moray East requires that all construction and operational vessels will comply with the procedures and requirements set out in this EMP and in other relevant documents as shown in Section **Error! Reference source not found.**.

8.6.2 *Other Marine Users*

The following separate documents have been prepared in order to manage and mitigate the effects on other marine users:

- Navigational Safety Plan (NSP);
- VMP;
- Lighting and Marking Plan (LMP); and
- Commercial Fisheries Mitigation Strategy (CFMS).

The content is not reproduced here, but the Contractors shall be provided copies of each document and will be required to comply with the requirements within each document.

8.6.3 *Air Pollution*

Air pollution from vessels, and in particular the emission of sulphur and nitrogen compounds (SOx and NOx) and Ozone-Depleting Substances (ODS) is strictly controlled by regulations that implement the International Convention for the Prevention of Pollution from Ships (MARPOL) and its various annexes and protocols. MARPOL Annex VI, which is specifically about air pollution, has 19 separate regulations, as well as a code for controlling nitrogen oxide emissions.

The Contractors shall ensure vessels on the Project comply with this Convention as part of their own operating procedures.

This shall be done through pre-mobilisation vessel audits.

8.6.4 *Biosecurity*

Biosecurity is concerned with the introduction and transfer of MINNS to the Site, and is included in Condition 3.1.10 (Environmental Protection) of the Wind Farm and OfTI Marine Licences, as well as part c) of Condition 14 of the Section 36 Consents (please see Appendix VI for Condition details). Moray East shall ensure that the risk of transferring MINNS to and from the Site is kept to a minimum by ensuring appropriate bio-fouling management practices are implemented during the Works[2].

The Contractors shall ensure that their vessels comply with the requirements set out in the following sections and provide all the suitable documentary evidence – in the form of a Biosecurity Plan – to the Moray East Project HSE Manager and MCC one month prior to the vessels entering the Site.

Management of biosecurity focuses on three areas:

- Ballast Water Management (BWM);
- antifouling; and
- equipment.

8.6.4.1 Ballast Water

Vessels contracted to work on the Project are required to follow current UK Guidance on BWM. These include:

- Maritime and Coastguard Agency MGN 363 (M+F): The Control and Management of Ships' Ballast Water and Sediments; and
- Maritime and Coastguard Agency MGN 81 (M+F): Guidelines for the Control and Management of Ships' Ballast Water to Minimise the Transfer of Harmful Aquatic Organisms and Pathogens.

Vessels will also be required to comply with the International Maritime Organisation (IMO) 1997 guidelines "Guidelines for the Control and Management of Ships' Ballast Water to Minimise the Transfer of Harmful Aquatic Organisms and Pathogens". In particular, when loading, discharging or exchanging ballast, the vessel will be required to comply with Section 9 of these guidelines.

To demonstrate compliance, Moray East requires the Contractors to submit a biosecurity plan that provides evidence of:

- a ballast water and sediment management plan which assists in the minimisation of non-native species through safe and effective procedures for BWM (to be provided in UK English);
- details of any approval by a UK recognised Classification Society of the ballast water and sediment management plan; and
- for vessels with BWM plan, the relevant certification or declaration.

In addition, the Vessel Masters/operators will be required to make the ballast water record book available to the Project HSE Manager and MCC.

8.6.4.2 Hull Anti-Fouling Management

Vessels contracted to work on the Project for any purpose will be required to follow current UK Guidance on the use of hull anti-fouling systems (AFS). These include:

- The Merchant Shipping (Anti-Fouling Systems) Regulations 2009;

[2] The approach to the biosecurity management was consulted upon with SNH, JNCC and MSS (July 2015) and comments addressed in the final Protocol. The Protocol will form part of the Project Procedures which the Contractors are required to comply with.

- Maritime and Coastguard Agency MGN 398 (M+F): Merchant Shipping (Anti-Fouling Systems) Regulations 2009; and
- The International Convention on the Control of Harmful Anti-Fouling Systems on Ships 2001.

All certificates, declarations and other relevant documentation should be valid for the contract period. Where the AFS will be renewed during the contracted period of works, details of where and how the system will be renewed – as part of the Biosecurity Plan – should be provided to the Project HSE Manager and MCC by the Contractors. This should include details of how any macro-fouling material and waste-water will be disposed of in accordance with relevant authority biosecurity plans.

8.6.4.3 Equipment Management Practices

All vessels working on the Project shall ensure:

- all equipment for use in the sea at Site is washed with fresh water and cleaned prior to arriving On Site but after previous contract has been completed; and
- where it is not possible to undertake such measures, justification should be provided within their biosecurity arrangements and operating procedures. Where the biosecurity and operating procedures dictate, time in air between different water bodies shall be allowed to ensure equipment is dry before use on Site. Details of the required time periods to ensure equipment is dried must be provided.

The process for cleaning and disposing of waste water should also be specified.

The Contractors shall provide information in support of the above to the Project HSE Manager and MCC.

8.6.5 *Seabed Impact*

The following sections address some requirements relating to the seabed.

8.6.5.1 Jack Up Operations

Jack up operations shall comply with the requirements of the following:

- Moray East marine management procedure:
  - vessel inspection and auditing;
  - documentation; and
  - equipment requirements;
- Moray East marine coordination procedure:
  - scheduling and planning;
  - access conflicts;
  - weather reporting; and
  - general navigational issues.
- Moray East seabed management plan:
  - movement around structures.

8.6.5.2 Vessel Anchoring

Any instances of vessel anchoring shall comply with the requirement of the:

- Moray East marine management procedure;
- Moray East marine coordination procedure; and
- Moray East seabed management plan.

8.6.6 *Dropped Objects*

In the event of any object being lost overboard, or dropped to the seabed, the Contractor shall inform the Project HSE Manager and MCC immediately. A dropped objects form (included in Appendix IV) must be submitted to MS-LOT and other relevant organisations no later than 24 hours after the object has been dropped (or as soon as possible where there is likely to be a significant hazard to other sea users). The Project HSE Manager, via the Development Team, shall consult with MS-LOT for advice on the appropriate remedial action if any.

8.6.7 *Archaeology*

The risk of discovering any archaeological object on the Site is low based on analysis of previous Site survey reports. However, in the event of discovering an object, the Contractors shall inform the Project HSE Manager and MCC immediately and subsequently the Moray East Protocol for Archaeological Discovery (PAD) shall be followed.

A Project specific Protocol for Marine Archaeology Reporting Protocol (MARP) / Written Scheme of Investigation (WSI) has been submitted separately in accordance with Condition 36 of the Section 36 Consents and Condition 3.2.2.16 of the OfTI Marine Licences.

8.6.8 *UXO*

UXO risk is addressed within the Project Emergency Response Plan.

A UXO survey and clearance programme has been completed prior to start of construction activities; therefore, the risk of discovering previously unidentified UXO has been reduced to ALARP.

However, in the event of a UXO discovery, the Contractors shall inform Project HSE Manager and MCC immediately.

In the unlikely event of needing to detonate a UXO, MS-LOT will be consulted (a separate Marine Licence will be sought as required) and the Joint Nature Conservation Committee (JNCC) guidelines for mitigating impact upon marine mammals will be followed. These guidelines will involve the following aspects:

- visual monitoring by Marine Mammal Observers (MMO);
- Passive Acoustic Monitoring (PAM);
- pre-detonation search for marine mammals;
- delay if marine mammals detected within the mitigation zone;
- sequencing of the explosive charges;
- Acoustic Deterrent Devices (ADDs);
- post-detonation search; and
- communication.

Moray East will consult with, and engage, a recognised, competent UXO disposal company for the safe handling and disposal of any UXO.

8.7 Marine Pollution Contingency Plan

An MPCP has been prepared in accordance with Condition 3.1.12 of the Marine Licences associated with the Moray East Offshore Wind Farm and the OfTI Marine Licence and Condition 3.2.1.8 of the OSP Marine Licence. The MPCP is linked to the EMP but is provided as a separate document to discharge the conditions outlined above.

The MPCP is prepared to minimise environmental impacts in response to an oil spill or other marine pollution event (e.g. grout or chemical spillage) associated with the Project.

The contents of the MPCP include:

- sources of potential pollution;
- roles and responsibilities;
- agencies and organisations;
- incident reporting;
- spill response; and
- tiers and responses.

The Contractors shall comply with the requirements of the MPCP and ensure their own arrangements are aligned.

8.8 Emergency Response Plan

Moray East has prepared an Emergency Response Plan (ERP) for the Project, this will be available via Viewpoint the project document management system.

There is an obvious link and overlap between the EMP, ERP and MPCP, because one incident might require pollution response, emergency response and environmental management as set out in this document; however, they are separate documents.

The Contractors shall have their own ERPs, specific to their scope of work, that align with Moray East ERP and ensure that the interfaces are clear.

9 Performance Evaluation

This section explains how Moray East will monitor, evaluate and analyse ongoing environmental performance on the Project of the Contractors, and the implementation of the EMP.

9.1 Environmental Monitoring

Moray East has produced a separate Project Environment Monitoring Plan (PEMP) which presents measures to monitor any effects of the Works. The PEMP has been submitted separately and complies with Condition 26 of the Section 36 Consents and Conditions 3.2.1.1 of the OfTI Marine Licences.

The PEMP includes monitoring of the following receptors:

- Birds
- Cod
- Herring
- Sandeels
- Diadromous fish
- Benthic communities; and
- Seabed scour

9.2 KPIs

In addition to the monitoring activities contained in the PEMP, the EMP has a number of Key Performance Indicators (KPIs) that apply to the Contractors. These are intended to generate the data required to demonstrate current and future levels of compliance to both Moray East and MS-LOT.

The Contractors shall submit a report of their monthly and cumulative performance figures to the Moray East Head of HSSE and the ECoW by the end of the first working week of each month during the Works.

Table 9-1: Key Performance Indicators

Key Performance Indicator Title	Details	Measure
Environmental Incidents and Near Misses	All environmental incidents and near misses On Site	Number
Environmental Audits	Audits performed On Site.	Number
Environmental Inspections	Inspections performed On Site	% completed
HSE Observation Cards	Cards submitted (+ve or –ve)	Number of Cards
Environmental Toolbox Talks	Number of TBTs conducted	Number of TBTs
Environmental Training	Number of people involved in environmental training sessions	Number of attendees
Licence or Condition Breaches	Determined from outputs of environmental incident reporting and audits.	Deviations from agreed design or method as set out in the ESs or consent discharge documents.
Emergency Communication Protocols	Knowledge of reporting chain/ability to communicate correctly in an emergency.	Pass/Fail

9.3 Inspection

Moray East shall conduct regular environmental inspections of the Works as part of routine activities. This may be done by a range of personnel and shall focus on the Contractor's level of compliance. Offshore, much of this will be done by the Moray East client representatives.

Furthermore, any persons authorised by MS-LOT must be permitted to inspect the Works at any reasonable time. As far as reasonably practicable, Moray East shall, on being given reasonable notice by MS-LOT (of at least 72 hours), provide transportation to and from the Site for any persons authorised by the Scottish Ministers to inspect the Site.

Subject to reasonable notice, the Contractors shall support these inspections by facilitating access (either through provision of space on a CTV, or space onboard a vessel onto which the persons will transfer) and ensure that they have their own arrangements set out in their EMPs.

9.4 Audit

Environmental auditing is an essential tool to ensure all Project environmental requirements are being fully implemented and environmental performance is continually improved. Audit requirements are set out in the following sections.

9.4.1 *Moray East Internal Audit*

Moray East shall ensure that a party independent of the Moray East Project team shall audit the internal application and ongoing suitability of the EMP on an annual basis. This may cover any aspect of the EMP, but the priority will be the effectiveness of Moray East's monitoring of the Contractors.

9.4.2 *Moray East Client Audit or Inspection*

Moray East's ECoW, the Project HSE Lead or Site HSE Adviser and the Moray East Offshore client representatives shall audit or inspect the Contractors at a frequency to be agreed. This will be no more frequent than monthly. Where possible, these shall be combined with any audits being conducted by the Contractors themselves.

These may cover any aspect of the Contractors' EMPs, but the priority will always be those aspects with a significant role to play in complying with Section 36 Consents and Marine Licence conditions.

9.4.3 *Contractor Audit*

The Contractors shall set out an indicative schedule for their own internal EMP auditing. They will be required to show evidence on a monthly basis to the ECoW and the Project HSE Manager that they are keeping up with their audit schedule and that they are closing out actions in a timely manner.

9.5 Evaluation of Consent/Licence Compliance

The ECoW shall, through a combination of their monitoring, inspections and audits produce an evaluation of ongoing compliance with the Section 36 Consents and Marine Licence conditions, and the relevant legislations.

This shall be documented on a monthly ECoW compliance report as shown in Appendix V.

The Moray East Head of HSSE shall also evaluate environmental legal compliance as part of the company's HSE Legal Compliance Procedure (document ref. no. 8460001-GHH0020-MWE-PRO-008) . This shall be done on an annual basis, following a suspected non-compliance, or as a consequence of trend analysis.

9.6 Accident and Incident Reporting and Investigation

9.6.1 *Reporting Requirements*

Moray East promotes an open culture and encourages the reporting of accidents, incidents and near misses. Even where there is doubt that anything has actually taken place, or is low significance, Moray East expects the Contractors to report by default. It is a fundamental aspect of continually improving performance, and assists not only with compliance, but the prevention of future problems.

To ensure that all incident details are shared quickly, the Contractors shall adhere to the 'Rapid Reporting Rule' whereby serious incidents must be reported and escalated through the management chain within 2 hours (detailed in the Moray East Incident Reporting Procedure document ref. no. 8460001-GHH0020-MWE-PRO-003). They shall ensure that all incidents in the list below are escalated immediately after their occurrence (within two hours maximum), and communicated directly to Moray East.

- potential lost time injuries
- anyone leaving Site for medical treatment i.e. hospital, local doctors etc.
- incidents requiring the call out of the emergency service
- reportable injuries or dangerous occcurrences as defined within Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)
- vessel collisions
- any incident involving electricity
- significant environmental incidents (e.g., marine pollution, including dropped objects at sea);
- incidents involving the carriage of dangerous goods

All other events to be reported at the earliest practical opportunity within 24 hours.

If any serious health and safety incident occurs on the Site requiring a report to the Health and Safety Executive, then Moray East must also notify the Scottish Ministers of the incident within 24 hours of the incident occurring.

Should the Contractors, by any reason accidentally deposit anywhere in the marine environment any substance or object, then Moray East shall notify the ECoW and MS-LOT of the full details of the circumstances of the deposit as soon as practical of the incident occurring via a dropped objects reporting from (Appendix IV).

Force majeure may be deemed to apply when, due to stress of weather or any other cause, the master of a vessel, vehicle or marine structure determines that it is necessary to deposit the substance or object other than at the Site because the safety of human life or the vessel, vehicle or marine structure is threatened. Under Annex II, Article 7 of the Convention for the Protection of the Marine Environment of the North-east Atlantic, MS-LOT is obliged to immediately report force majeure incidents to the Convention Commission. Deposits of any object or substance due to force majeure would be reported to MS-LOT as soon as practical.

Where there is a requirement for involvement of the MCA, details for reporting are outlined in the MPCP.

9.6.2 *Investigation Requirements*

The Contractors shall have in place a system for the investigation and analysis of incidents and accidents, whose focus should be on the identification of root causes.

The Contractors shall share all details and reports relating to an investigation on the incident conducted on Project activity and issue an interim report(s) if the investigation is likely to take longer than two weeks.

Moray East may request to be involved in the investigation team of any incident. It will also want to review, comment on, or contribute to any investigation outcomes / recommendations / remedial actions and verify that they have been implemented and are achieving their intended aim.

Where sufficient concern exists, Moray East may also conduct its own investigation into an Environmental incident. The Contractors shall support this as required.

9.7 Lessons Learned

Either as part of or, in addition to any audit, inspection or investigation, the Contractors shall conduct 'lessons learned' sessions as required. The Moray East HSSE team and the ECoW will support in this process as required and may formally request that one takes place. The following instances may prompt a lessons learned session:

- following a particular project milestone or phase;
- following a particular operation;
- following a perceived shift in performance levels;
- following an audit;
- following an inspection; and
- following an investigation.

As a minimum Moray East and the Contractors shall conduct a joint lessons learned session on an annual basis.

Should this process, or any other, generate environmental information worth sharing, Moray East shall inform MS-LOT and the wider industry.

9.8 Analysis and Evaluation

9.8.1 *Monthly Analysis and Evaluation*

All information generated in support of the EMP (audits, monitoring, KPIs, lessons learned etc.) shall be analysed on a monthly basis by the Head of HSSE. This is to identify any early warnings or short-term trends that suggest the Contractors are close to non-compliance.

9.8.2 *Annual Analysis and Evaluation*

All information generated in support of the EMP (audits, monitoring, KPIs, lessons learned etc.) shall be analysed on an annual basis. This shall be coordinated by the Moray East Head of HSSE, with the support of the ECoW and the Offshore Consents Manager.

The output of this will be an annual report for the Project Director and Moray East Board.

9.9 Management Review

The Moray East Project Director and Moray East Board shall review the annual environmental performance report as described in Section 9.8 and make recommendations for change or improvement.

10 Improvement

This section presents the arrangements for improving environmental performance.

10.1 General Improvement

Improvement does not always take place on a continual basis. Sometimes it occurs because of corrective action or innovation and sometimes because of reorganisation. Wherever the opportunity arises, Moray East shall aim to improve its environmental arrangements and performance.

10.2 Non-Conformity and Corrective Action

The Moray East improvement management procedure applies to the implementation of this document.

It covers:

- complaints
- potential non-conformance
- non-conformance
- risk-based action
- corrective action

This is the mechanism with which Moray East will set out and track any actions taken to address the compliance issues of the Contractors.

All shall support that system and implement any actions placed upon them in a timely manner.

10.3 Continual Improvement

As part of commitment to continual improvement this document shall be reviewed six monthly, or as required.

This will use any of the outputs of the processes described in Section 9, Performance Evaluation, and have a focus on maintaining and/or increasing the levels of compliance.

10.3.1 *EMP Updates*

As part of the improvement process, the impact of any changes to the EMP contents is assessed and should they result in any variations to previously agreed mitigation, or a potential increase in environmental impact, then the revision shall be shared with MS-LOT for comment prior to issue.

10.3.2 *EMP O&M Update*

Moray East shall, no later than three months prior to the Final Commissioning, submit updated EMPs to cover the O&M activities for the Moray East Offshore Wind Farm and OfTI to the Scottish Ministers for their written approval. In line with this requirement, Moray East will submit the updated EMPs to MS-LOT for approval by the Scottish Minsters at least three months prior to the final commissioning of the Project.

The operational EMPs will reflect the working practices and potential environmental management issues set out in the approved Operation and Maintenance Programme(OMP. The updated EMP will focus on the activities associated with the O&M of the Development and incorporate any findings or lessons learned during the construction phase.

APPENDIX I – QUALITY AND HSE POLICY STATEMENT

MORAY EAST
OFFSHORE WINDFARM

Moray Offshore Windfarm (East) Limited
Quality and HSE Policy Statement

8460001-GHH0020-MWE-POL-001
Status
02-Aug-2019
Revision 02

Moray Offshore Windfarm (East) Limited is fully committed to meet shareholders requirements and to engage with all stakeholder to meet expectations and to deliver to our promises.

As an essential element in demonstrating our commitments we will continually strive to exceed our Quality and HSE performance in accordance with the requirements of ISO 9001 (Q), ISO 45001 (HS) and ISO 14001 (E) respectively and will initiate strategies that will:

- Develop, continually improve and measure overall performance, by establishing attainable Quality and HSE Key Performance Indicators (KPI's),
- Acknowledge and reward excellence, and
- Promote corporate responsibility.

More specifically we will:

- Maintain a commitment to prevention of ill health and injuries to all employees, contractors, visitors and members of the public, and prevention of pollution on undertakings under our control
- Provide a safe working environment to all employees, contractors, visitors and members of the public, on undertakings under our control, by providing and maintaining safe plant, safe equipment, safe facilities and safe working practices
- Ensure all undertakings are adequately planned and resourced and carried out by trained and competent personnel
- Identify all hazards/aspects and mitigate risks/impacts associated with our undertakings, in compliance with statutory obligations and Moray Offshore Windfarm (East) Limited and shareholders-imposed requirements
- Commit to continuous improvement throughout our business activities, by the setting and monitoring of clearly defined measureable objectives that are applicable to all employees
- Consult with our employees on all matters which may affect their health and safety
- Engage with our employees, suppliers and contractors to promote our safety first, Zero Harm, and corporate responsibility aspirations.
- Ensure employees are provided with adequate training, information, instruction and supervision to enable them to undertake their duties competently
- All employees will be actively encouraged to report near misses and safety/environmental concerns in order to create a "no-blame" culture of safety, responsibility and ownership
- Reduce our carbon footprint by conserving natural resources and reducing energy use and waste generated by our operations
- Support and maintain our commitment to the protection of the environment, including prevention of pollution
- Ensure the implementation and maintenance of the management systems, enabling continuous improvement through regular monitoring, audit and review.

This Quality and HSE Policy Statement will be displayed on notice boards at all Moray Offshore Windfarm (East) Limited facilities and will form part of all employee induction training.

This Policy Statement is supported by the Moray Offshore Windfarm (East) Limited Integrated Management System and is endorsed by Senior Management.

This Policy will be reviewed periodically to ensure its continued adequacy and suitability.

[Redacted]

Marcel Sunier
Project Director
Moray Offshore Windfarm (East) Limited
Date: 2 Aug 2019

APPENDIX II – HSE CHARTER

MORAY EAST PROJECT - HSE CHARTER

MORAY EAST
OFFSHORE WINDFARM

HSE Value
What we believe and what we do

We are all leaders, we are all responsible
We provide visible leadership across the project at all stages We ensure the entire workforce, whoever the employer, has a clear understanding of the **ZERO HARM** vision and the vital part each and every-one plays to make it a reality, and promote the benefits of a healthy workforce across the project

LEADERSHIP

COMPETENCE

We employ competent people
We invest in health and safety training for all people on the project, enabling them to carry out their tasks without putting themselves, others or the environment at risk by having clear HSE competence requirements for all people working on the project, and to carry out site-specific induction and **ZERO HARM** Workshop for all, onshore and offshore

We observe, we report and we learn
We monitor performance and share best practices so lessons can be learned and good industry practices can be widely communicated for the mutual benefit of everybody on the project

IMPROVEMENT

ZERO HARM

PERFORMANCE

We assess all risks and we follow procedures
We plan and prepare every task allowing time to focus on risk reduction to people and the environment

We know our obligations and we meet them

COMPLIANCE

CULTURE

We think, we talk, we expect feedback and we accept challenges
We communicate HSE instructions and information in an easy and understandable way, appropriate for the audience we are engaging with, We stop work with no fear of sanction (anybody is entitled to stop the works if unsafe)

Our shared goal is excellence in Health, Safety & Environment and our vision is: **ZERO HARM**

The health, safety and welfare of people and the environment is the Project's top priority. In signing this charter, we are demonstrating our commitment to achieve **ZERO HARM** by fostering a positive Health, Safety and Environmental culture.

We believe in a project with zero lost-time and zero environmental incidents. Every company and individual working on the Project shares this priority and promotes Moray East's core HSE values.

MORAY EAST
OFFSHORE WINDFARM
Marcel Sunier
Project Director
[Redacted]

GeoSea
SMULDERS
Stijn Kenis
Project Director
[Redacted]

Boskalis
Rik Lammes
Director Operations
[Redacted]

NKT
Gerd-Wolf Balk
Project Director
[Redacted]

SIEMENS
Anwer Amarakorba
Project Director
[Redacted]

Allan Birk Jakobsen
Project Director
[Redacted]

APPENDIX III – TRANSPORTATION AUDIT REPORT

Moray East Offshore Wind Farm **Transportation Audit Report**
This form must be completed in accordance with Wind Farm Marine Licence Condition 3.2.2.2, OfTI Marine Licence Condition 3.2.3.4 and OSP Marine Licence Condition 3.2.3.3

Stevenson Wind Farm Marine Licence

Wind Farm	Parameter	Volume/Weight	Cumulative Deposits	Remaining Licenced Deposits	Deposits <Insert Month>
Infrastructure type: Jackets and Pin Piles	Steel/Iron (tonnes)				
	Plastic/Synthetic (tones)				
	Concrete (tonnes)				
	Stone/Rock/Gravel, size range				
	Stone/Rock/Gravel, volume (m^3)				
	Concrete bags/Mattresses (6m x 3m x 1.5m), number				
	Concrete bags/Mattresses, volume (m^3)				
	Cable (m)				

Telford Wind Farm Marine Licence

Wind Farm	Parameter	Volume/Weight	Cumulative Deposits	Remaining Licenced Deposits	Deposits <Insert Month>
Infrastructure type: Jackets and Pin Piles	Steel/Iron (tonnes)				
	Plastic/Synthetic (tones)				
	Concrete (tonnes)				
	Stone/Rock/Gravel, size range				
	Stone/Rock/Gravel, volume (m^3)				
	Concrete bags/Mattresses (6m x 3m x 1.5m), number				
	Concrete bags/Mattresses, volume (m^3)				
	Cable (m)				

MacColl Wind Farm Marine Licence

Wind Farm	Parameter	Volume/Weight	Cumulative Deposits	Remaining Licenced Deposits	Deposits <Insert Month>
Infrastructure type: Jackets and Pin Piles	Steel/Iron (tonnes)				
	Plastic/Synthetic (tones)				
	Concrete (tonnes)				
	Stone/Rock/Gravel, size range				
	Stone/Rock/Gravel, volume (m^3)				
	Concrete bags/Mattresses (6m x 3m x 1.5m), number				
	Concrete bags/Mattresses, volume (m^3)				
	Cable (m)				

Offshore Transmission Infrastructure Marine Licence

OfTI	Parameter	Volume/Weight	Cumulative Deposits	Remaining Licenced Deposits	Deposits <Insert Month>
Infrastructure type: Jackets and Pin Piles	Steel/Iron (tonnes)				
	Plastic/Synthetic (tones)				
	Concrete (tonnes)				
	Stone/Rock/Gravel, size range				
	Stone/Rock/Gravel, volume (m^3)				
	Concrete bags/Mattresses (6m x 3m x 1.5m), number				
	Concrete bags/Mattresses, volume (m^3)				
	Cable (m)				

Offshore Substation Platforms Marine Licence

OfTI	Parameter	Volume/Weight	Cumulative Deposits	Remaining Licenced Deposits	Deposits <Insert Month>
Infrastructure type: Jackets and Pin Piles	Steel/Iron (tonnes)				
	Plastic/Synthetic (tones)				
	Concrete (tonnes)				
	Stone/Rock/Gravel, size range				

OfTI	Parameter	Volume/Weight	Cumulative Deposits	Remaining Licenced Deposits	Deposits <Insert Month>
	Stone/Rock/Gravel, volume (m^3)				
	Concrete bags/Mattresses (6m x 3m x 1.5m), number				
	Concrete bags/Mattresses, volume (m^3)				
	Cable (m)				

Backfilling Marine Licence

At and adjacent to the windfarm site	Parameter	Volume/Weight	Cumulative Deposits	Remaining Licenced Deposits	Deposits <Insert Month>
Infrastructure type: Jackets and Pin Piles	Stone/Rock/Gravel, size range				
	Stone/Rock/Gravel, volume (m^3)				

APPENDIX IV – DROPPED OBJECTS REPORTING FORM

marinescotland

The Scottish Government
Riaghaltas na h-Alba

Reference Number:
Version: 01

DROPOB1 - OFFSHORE WIND & MARINE RENEWABLES DROPPED OBJECTS FORM

Marine Scotland notification pro-forma for reporting the dropped materials from the offshore wind/marine renewables industry at sea

This DROPOB1 form should be completed in conjunction with the 'Dropped Objects Policy Guidance'. This DROPOB1 must be submitted electronically to the organisations listed below no later than 24 hours after the event takes place (or as soon as possible where there is likely to be a significant hazard to other sea users). In circumstances where not all the information is available within 24 hours, the form should be submitted and can be updated at a later time.]

Marine Scotland	**MS.MarineRenewables@gov.scot**
Local HM Coastguard Station(s)	**[dependent on location of dropped object]**
Maritime & Coastguard Agency	navigationsafety@mcga.gov.uk
Kingfisher at Seafish	kingfisher@seafish.co.uk
Northern Lighthouse Board	Navigation@nlb.org.uk
UK Hydrographic Office (UKHO)	sdr@ukho.gov.uk
Navigational Warnings at UKHO	navwarnings@btconnect.com
Scottish Fisherman's Federation	PON2@sff.co.uk
Where geographically relevant:	
West Coast RIFG	Alastair.mcruaraidh.mcneill@gmail.com
Outer Hebrides RIFG	duncan@craigard.co.uk
Orkney Management Group	orkneyfisheries@btconnect.com
Shetland Shellfish Management Organisation	carole@ssmo.shetland.co.uk

Reporter details		Date of report:
Full name:	**Position/Title:**	
Contact telephone no:	**Contact e-mail:**	
Operator/Organisation/Company responsible for dropped object:		

Name licensee or vessel responsible for dropped object	
Location/position at the time of dropping object:	
Latitude:	**Longitude:**
Date dropped:	**Time (24hours):**
Weather conditions at time:	**Depth of sea (metres):**
Wind direction (0-360 degree):	**Wind speed (knots):**
Beaufort scale: **Tide rate/direction:**	**Wave height (metres):**

marinescotland

The Scottish Government
Riaghaltas na h-Alba

Reference Number:
Version: 01

Dropped object(s) – provide full description. Materials involved, function of object, dimensions etc. Provide photos if available.	Dropped objects:
If the materials are resting on the seabed are they near offshore assets? **If yes please provide details:**	
Are the materials likely to float on sea surface or in water column? **If no, estimated clearance over object:**	
If the answer to question above is yes - are materials likely to reach shore or cross an international border? - please specify	
Reasons for dropping object(s)	
What are the plans to recover the materials? Please specify details, including anticipated timescales for the recovery operation. If there are no plans to recover the materials the reason for this must be clearly specified.	
What are considered to be the risks and dangers to other users of the sea as a result of the lost or dumped materials not being recovered?	
Any further information that may be useful:	
In addition to those mandatory stated at the top of this form, please list the organisations that you have / will copy this form to:	

marinescotland

The Scottish Government
Riaghaltas na h-Alba

Reference Number:
Version: 01

For internal Marine Scotland use only:	
Incident history:	
Date of notification:	
Actions taken:	
Final action:	
Confirmation that case is closed : ☐	
Name of person closing the dropped objects case:	
Date closed:	
Reason for closing case:	
MS – Compliance/Fisheries/Renewables	
SFF	
NFFO	
IFGs	
MCA	
Kingfisher	
NLB	
UKHO	

APPENDIX V – MONTHLY ECOW COMPLIANCE REPORT

Moray East Offshore Wind Farm Monthly ECoW Compliance Report	
Reporting Period:	
Report prepared By:	
Date of Report:	
Other Contributors	TBC TBC TBC

Section 1 – Summary of Construction Activities in <insert Month and year>	
Component	**Description of Activities**
Preparatory Works	
Foundations	
Substructures	
Cables	
WTGs	

Section 2 – Summary of Environmental Management Issues Arising in <insert Month and year>			
Date	**Construction Activity**	**Description of Environmental Management Issue**	**Corrective Action Taken**
Any other relevant comments in relation to environmental management measures in the reporting period			

Section 3 – Summary of Environmental and Pollution Incidents Arising in <insert Month and year>			
Date	**Construction Activity**	**Description of Pollution Event**	**Corrective Action Taken and Status**
Any other relevant comments in relation to pollution prevention or planning in the reporting period			

Section 4 – Summary of Notifications Issued in <insert Month and year>			
Date	**Main Activity**	**Notices Issued**	**Issued to**
Any other relevant comments in relation to notifications issued in the reporting period			

Section 5 – Summary of Planned Construction Activities in <insert Month and year>	
Component	**Description of Activities**
Preparatory Works	
Foundations	
Substructures	
Cables	
WTGs	

Section 6 – Construction Programme Updates
Changes to scheduling of works

Section 7 – Additional Information related to Environmental Management Measures in <insert Month and year>		
ECoW Environmental Management and Training Activities Statistics		
Type	**Completed this month**	**Completed to date**
Vessel inspections (including review of inspections)		
Walkdowns/construction activity observations (Inspections by Management/Engineers)		
Drills (led and/or observed) (statistics taken from Client Representative Daily Progress Reports (DPR). No environmental drills)		
Training sessions (Inductions)		
Toolbox talks (statistics taken from Client Representative DPR)		
Observation cards (statistics taken from Client Representative DPR)		
Any other relevant comments in the reporting period		

APPENDIX VI – CONSENT REQUIREMENTS

Table A VI-1: EMP consent requirements and how they are addressed within this document

Condition Text	Relevant Section of this EMP
Section 36 Consents (Telford, Stevenson and MacColl Wind Farms) as varied – Condition 14	
The Company must, no later than 6 months prior to the Commencement of the Development, submit an Environmental Management Plan ("EMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, SEPA, RSPB Scotland and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.	This document sets out the EMP for approval by the Scottish Ministers. Consultation to be undertaken by the Scottish Ministers.
The Development must, at all times, be constructed and operated in accordance with the approved EMP (as updated and amended from time to time by the Company).	Section 1 and Section 10.3.
Any updates or amendments made to the EMP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.	Section 1 and Section 10.3.
The EMP must provide the over-arching framework for on site environmental management during the phases of development as follows: a. all construction as required to be undertaken before the Final Commissioning of the Development; and b. the operational lifespan of the Development from the Final Commissioning of the Development until the cessation of electricity generation. (Environmental management during decommissioning is addressed by condition 3).	Section 1.2.
The EMP must be in accordance with the ES as it relates to environmental management measures.	Appendix VII.
The EMP must set out the roles, responsibilities and chain of command for the Company personnel, any contractors or sub-contractors in respect of environmental management for the protection of environmental interests during the construction and operation of the Development.	Section 7.
It must address, but not be limited to, the following over-arching requirements for environmental management during construction: a. Mitigation measures to prevent significant adverse impacts to environmental interests, as identified in the ES and pre-consent and pre-construction surveys, and include the relevant parts of the CMS (refer to condition 10). b. Pollution prevention measures and contingency plans. c. Management measures to prevent the introduction of invasive non-native marine species; d. Measures to minimise, recycle, reuse and dispose of waste streams.; and e. The reporting mechanisms that will be used to provide the Scottish Ministers and relevant stakeholders (including, but not limited to, the JNCC, SNH, SEPA, RSPB Scotland, MCA and NLB) with regular updates on construction activity, including any environmental issues that have been encountered and how these have been addressed.	Section 7.5.4, Section 8, Appendices I, III,IV and V and within the Moray East CMS.
The Company must, no later than 3 months prior to the Final Commissioning of the Development, submit an updated EMP, in writing, to cover the operation and maintenance activities for the Development to the Scottish Ministers for their written approval. Such approval may be given only following consultation with the JNCC, SNH, SEPA, RSPB Scotland and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.	Section 1 and Section 10.3.

Condition Text	Relevant Section of this EMP
The EMP must be regularly reviewed by the Company and the MFRAG (referred to in condition 27) over the lifespan of the Development, and be kept up to date (in relation to the likes of construction methods and operations of the Development in terms of up to date working practices) by the Company in consultation with the MFRAG.	Section 1 and Section 10.3.
The EMP must be informed, so far as is reasonably practicable, by the baseline surveys undertaken as part of the ES and the PEMP.	Appendix VII.
OfTI Marine Licence– condition 3.2.1.2 {& OSP Marine Licence– condition 3.2.1.2}	
The Licensee must, no later than 6 months prior to the Commencement of the Works, submit an EMP, in writing, to the Licensing Authority for their written approval. Such approval may only be granted following consultation by the Licensing Authority with the JNCC, SNH, SEPA, Aberdeenshire Council and any such other advisors or organisations as may be required at the discretion of the Licensing Authority.	This document sets out the EMP for approval by the Scottish Ministers. Consultation to be undertaken by the Scottish Ministers.
The Works must, at all times, be constructed and operated in accordance with the approved EMP (as updated and amended from time to time by the Licensee).	Section 1 and Section 10.3.
Any updates or amendments made to the EMP by the Licensee must be submitted, in writing, by the Licensee to the Licensing Authority for their written approval.	Section 1 and Section 10.3.
Such approval may only be granted following consultation by the Licensing Authority with Aberdeenshire Council.	Section 1 and Section 10.3.
The EMP must set out a mechanism for the approval process for all proposed updates to the EMP. This must include, but not be limited to, a programme for the consideration of the consultation on, and any subsequent grant of approval of the proposed updated EMP, to be agreed in writing between the Licensee and the Licensing Authority.	Section 1 and Section 10.3.
The EMP must provide the over-arching framework for on-site environmental management during the phases of works as follows: a) all construction as required to be undertaken before the Final Commissioning of the Works; and b) the operational lifespan of the Works from the Final Commissioning of the Works until the cessation of electricity transmission (environmental management during decommissioning is addressed by condition 3.2.2.2).	Section 1.2
The EMP must be in accordance with the Application as it relates to environmental management measures.	Appendix VII.
The EMP must set out the roles, responsibilities and chain of command of any Licensee personnel, contractors or sub-contractors in respect of environmental management for the protection of environmental interests during the construction and operation of the Works.	Section 7.
It must address, but not be limited to, the following over-arching requirements for environmental management: a) Mitigation measures to prevent significant adverse impacts to environmental interests, as identified in the Application and pre-consent and pre-construction surveys, and include the relevant parts of the Construction Method Statement ("CMS"); b) A completed Written Scheme of Investigation ("WSI") approved by Historic Scotland; c) Pollution prevention measures and contingency plans; d) Management measures to prevent the introduction of marine non-native marine species;	Section 7.5.4, Section 8, Appendices I, III, IV and V and within the Moray East CMS.

Condition Text	Relevant Section of this EMP
e) Measures to minimise, recycle, reuse and dispose of waste streams; and f) The methods for responding to environmental incidents and the reporting mechanisms that will be used to provide the Licensing Authority and relevant stakeholders (including, but not limited to, the JNCC, SNH, SEPA, Maritime and Coastguard Agency ("MCA") and the Northern Lighthouse Board ("NLB")) with regular updates on construction activity, including any environmental issues that have been encountered and how these have been addressed.	
The Licensee must, no later than 3 months prior to the Final Commissioning of the Works, submit an updated EMP, in writing, to cover the operation and maintenance activities for the Works to the Licensing Authority for their written approval. Such approval may be given only following consultation with the JNCC, SNH, SEPA and any such other advisors or organisations as may be required at the discretion of the Licensing Authority.	Section 1 and Section 10.3.
The EMP must be regularly reviewed by the Licensee and the MFRAG (refer to conditions 3.2.2.18 and 3.2.3.10) over the lifespan of the Works and be kept up to date (in relation to the likes of construction methods and operations of the Works in terms of up to date working practices) by the Licensee in consultation with the MFRAG.	Section 1 and Section 10.3.
The EMP must be informed, so far as is reasonably practicable, by the baseline surveys undertaken as part of the Application and the PEMP.	Appendix VII.

Table A VI-2: Other consent requirements and how they are addressed within this document

Condition Text[3]	Relevant Section of this EMP
Force Majeure **Wind Farm (Telford, Stevenson and MacColl Wind Farms) Marine Licences (as varied) – Condition 3.1.3** **OfTI Marine Licence– condition 3.1.3 & OSP Marine Licence– condition 3.1.4**	
Should the Licensee or any of their agents, contractors or sub-contractors, by any reason of force majeure deposit anywhere in the marine environment any substance or object, then the Licensee must notify the Licensing Authority of the full details of the circumstances of the deposit within 48 hours of the incident occurring (failing which as soon as reasonably practicable after that period of 48 hours has elapsed). Force majeure may be deemed to apply when, due to stress of weather or any other cause, the master of a vessel, vehicle or marine structure *{'marine structure' replaced by vehicle operator within OfTI Licences}* determines that it is necessary to deposit the substance or object other than at the Site because the safety of human life or, as the case may be, the vessel, vehicle or marine structure is threatened. Under Annex II, Article 7 of the Convention for the Protection of the Marine Environment of the North-east Atlantic, the Licensing Authority is obliged to immediately report force majeure incidents to the Convention Commission.	Section 8.5 and 8.6
Chemical Usage **Wind Farm Marine Licences (Telford, Stevenson and MacColl Wind Farms) as varied – Condition 3.1.7** **OfTI Marine Licence– condition 3.1.7 & OSP Marine Licence– condition 3.1.8**	
The Licensee must ensure that all chemicals which are to be utilised in the Works have been approved in writing by the Licensing Authority prior to use. All chemicals utilised in the Works must be selected from the List of Notified Chemicals assessed for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002, unless approved in writing by the Licensing Authority {*'unless approved in writing by the Licensing Authority' replaced with '(as amended) or as exempted for sealed units. The Licensee must submit a report of all chemicals and quantities to be used (e.g. oils and fluorinated gases) during the construction, and operation of the works to the Licensing Authority no later than one calendar month prior to the Commencement of the Works. Any changes to the types of chemicals which are proposed to be utilised must be consulted on with the Licensing Authority prior to the Commencement of the Works or, as the case may be, after the Commencement of the Works but prior to their utilisation.' within OSP Marine Licence*}.	Section 8.5.2

[3] The Wind Farm Marine Licences, the OfTI Marine Licence and the OSP Marine Licence conditions are the same expect where {additional} text has been added as indicated.

Condition Text[3]	Relevant Section of this EMP
Environmental Protection **Wind Farm Marine Licences (Telford, Stevenson and MacColl Wind Farms) as varied – Condition 3.1.8** **OfTI Marine Licence– condition 3.1.8 & OSP Marine Licence– condition 3.1.10**	
The Licensee must ensure that all reasonable, appropriate and practicable steps are taken at all times to minimise damage to the Scottish marine area and the UK marine licensing area caused by the Licensable Marine Activity authorised under this licence. *{'caused by the Licensable Marine Activity authorised under this licence' replaced by 'caused by the carrying out of the Licensable Marine Activity/as a result of the undertaking of the licensed activities'' within OfTI Licences*}. *{'The Licensee shall ensure appropriate steps are taken to minimise damage to the beach and foreshore by the Licensable Marine Activity.' included within the OfTI Marine Licence}* *{'The Licensee must ensure that all personnel adhere to the Scottish Marine Wildlife Watching Code where appropriate during all installation, operation and maintenance activities authorised under this licence.' included within the OSP Marine Licence*} The Licensee must ensure that any debris or waste material placed below MHWS during the construction and operation of the Works is removed from the Site, as soon as is reasonably practicable, for disposal at a location above the MHWS approved by the Scottish Environment Protection Agency ("SEPA"). The Licensee must ensure that all substances and objects deposited during the execution of the Works are inert (or appropriately coated or protected so as to be rendered inert) and do not contain toxic elements which may be harmful to the marine environment, the living resources which it supports or human health.	Section 8
The Licensee must ensure that the risk of transferring marine non-native species to and from the Site is kept to a minimum by ensuring appropriate bio-fouling management practices are implemented during the Works.	Section 8.6.4
The Licensee must ensure that if oil based drilling muds are utilised they must be contained within a zero discharge system. Any drill cuttings associated with the use of water-based drilling muds situated within the outer boundary of the Works need not be removed from the seabed.	Section 8.5.6
Marine Pollution Contingency Plan **Wind Farm Marine Licences (Telford, Stevenson and MacColl Wind Farms) as varied – Condition 3.1.12** **OfTI Marine Licence– condition 3.1.12 & OSP Marine Licence– condition 3.2.1.8**	

Condition Text[3]	Relevant Section of this EMP
The Licensee must, no later than 3 months prior to the Commencement of the Works, submit in writing to the Licensing Authority for their written approval, a MPCP. The MPCP must make provision in respect of spills and collision incidents occurring during the construction and operation of the Works and where such spills or collisions occur then the MPCP must be adhered to in full. The MPCP must take into account existing plans for all operations, including offshore installations that may have an influence on the MPCP. Practices used to refuel vessels at sea must conform to industry standards and to relevant legislation. The MPCP must set out how any oil leaks within the WTGs are to be remedied and that such relevant repairs are required to be undertaken without undue delay. *(the above paragraph replaced with 'The MPCP must set out how any oil leaks within the structures are to be remedied and that such relevant repairs are required to be undertaken without undue delay' within the OSP & OfTI Marine Licence)* Commencement of the Works must not occur until the Licensing Authority has given its written approval to the MPCP. The Works must be constructed and operated in accordance with the MPCP.	Section 8.7 Moray East MPCP provided as a separate document.

Condition Text[3]	Relevant Section of this EMP
Transportation Audit Report **Wind Farm Marine Licences (Telford, Stevenson and MacColl Wind Farms) as varied – Condition 3.2.2.2** **OfTI Marine Licence– condition 3.2.3.4 & OSP Marine Licence– condition 3.2.3.3**	
The Licensee must submit to the Licensing Authority a detailed TAR for each calendar month during the construction phase of the Works. The TAR must be submitted within 14 days of the end of that calendar month. The TAR must include the nature and quantity of all substances and objects deposited and materials used in construction (as described in Part 2 of this licence) in that calendar month. Alterations and updates can be made in the following month's TAR. Where appropriate, nil returns must be provided. If the Licensee becomes aware of any substances, objects or materials on the TAR that are missing, or becomes aware that an accidental deposit has occurred, the Licensee must notify the Licensing Authority as soon as practicable. The Licensee must undertake such survey as directed by the Licensing Authority to locate the substances, objects and materials. If the Licensing Authority is of the view that any accidental deposits have occurred and should be removed, then the materials must be removed by the Licensee as soon as is practicable and at the Licensee's expense.	Section 8.5.1 and Appendix III
Bunding and Storage Facilities **Wind Farm Marine Licences (Telford, Stevenson and MacColl Wind Farms) as varied – Condition 3.2.2.7** **OfTI Marine Licence– condition 3.2.1.6 & OSP Marine Licence– condition 3.2.1.6**	
The Licensee must ensure suitable bunding and storage facilities are employed to prevent the release of fuel oils, lubricating fluids associated with the plant and equipment into the marine environment.	Section 8.5.3
Restoration of the Site to its original condition **Wind Farm Marine Licences (Telford, Stevenson and MacColl Wind Farms) as varied – Condition 3.2.2.8** **OfTI Marine Licence– condition 3.2.1.7 & OSP Marine Licence – condition 3.2.1.7**	

Condition Text[3]	Relevant Section of this EMP
The Licensee must take all reasonable, appropriate and practicable steps to restore the Site to its original condition before the Licensable Marine Activity was undertaken, or to as close to its original condition as is reasonably practicable, in accordance with the PEMP and the Decommissioning Programme ("DP") to the satisfaction of the Licensing Authority. Should the Licensed Marine Activity be discontinued prior to Completion of the Works, the Licensee must inform the Licencing Authority in writing of the discontinuation of the Works. *(above paragraph replaced with 'The Licensee must take all reasonable, appropriate and practicable steps to restore the Site to its original condition before the Works were undertaken, or to as close to its original condition as is reasonably practicable, in accordance with the PEMP and the Decommissioning Programme ("DP") to the satisfaction of the Licensing Authority. Should the Works be discontinued prior to Completion of the Works, the Licensee must inform the Licencing Authority in writing of the discontinuation of the Works. 'within the OSP Marine Licence.* *A marine licence application will be required for the removal of Works.' within the OSP Marine Licence.* (*Above paragraph replace with 'This licence will be varied under section 30(3) of the 2010 Act and under section 72(3) of the 2009 Act to allow the removal of Works already installed'. Within the OfTI marine licence*	Section 8.5.5

APPENDIX VII – MORAY EAST ES COMMITMENTS

Table A VII-1: Wind Farm Commitments (ES 2012)

Commitment	Post Moray East ES 2012 Updates	Discipline	Compliance Strategy	Compliance Details
All Project Phases				
Development of and adherence to an EMP compliant with ISO14001 or BSA 555, will limit the risk of accidental spillages or releases occurring or ensure that adequate contingency is in place (i.e. MPCP) to resolve any incidents quickly. Also, establishment of an Environmental Mitigation and Monitoring Plan (EMMP) will identify appropriate measures to avoid or minimise adverse effects on marine life.		Benthic Ecology	Licence Condition	Section 36 condition 14 (EMP)
Within the scoping opinion, SEPA have recommended that developers draw up and adopt a protocol to minimise risks of introducing marine invasive species. A Marine Non Native Species Plan will be agreed pre-construction and will be implemented during all phases of the project.		Benthic Ecology	Licence Condition	Section 36 condition 14 (EMP)
Moray Offshore Renewables Limited (MORL) is committed, in consultation with Marine Scotland and the relevant fisheries stakeholders, to undertake additional salmon survey work and monitoring with the objective of increasing the confidence in this impact assessment and identifying whether mitigation is required and, if so, to define feasible measures in order to reduce the significance of the likely effects.	Superseded by s.36 condition 30 ow covered through ScotMER	Fish and Shellfish Ecology	Licence Condition	Section 36 condition 30 (participation in the Scottish Atlantic Salmon, Sea Trout and European Eel Monitoring Strategy)
During all phases, vessel traffic will be along set routes; thus reducing the area of disturbance and increasing the likelihood of habituation to disturbance. Operational monitoring requirements will be agreed with regulators and SNCBs (Statutory Nature Conservation Bodies).		Ornithology	Licence Condition	Section 36 condition 15 (VMP)
A construction management plan will be defined in consultation with fishing interests which clearly establishes protocol for engagement between the developer and fishermen throughout the construction period. In order for the various fishing sectors to be appropriately represented, as well as the		Commercial Fisheries	Licence Condition	Section 36 condition 31 (MFOWDG-CFWG)

Commitment	Post Moray East ES 2012 Updates	Discipline	Compliance Strategy	Compliance Details
developer and the regulatory body, a working group will be established that facilitates the following: • Ongoing dialogue between the fishing community and MORL throughout the pre-construction and construction phase; • Protocol for the navigation of wind farm construction and works vessels to and from the Site (i.e. agreement of transit lanes to, where possible given other receptors, minimise interference to fishing activities); • Established procedures in the event of interactions between wind farm construction and fishing activities (i.e. claims for lost and / or damaged gear); • Protocol for removal of seabed obstacles post-construction; and • Engagement on appropriate phasing of construction safety zones dependent on the construction programme. MORL agrees with SFF that the Working Group will be an important forum to ensure regular liaison between the renewable energy and commercial fisheries industries in the Moray Firth, as detailed within the ES, and will remain committed to the Working Group throughout the pre-construction, construction, operational and decommissioning phases of the project.				
MORL would like to investigate a number of other opportunities that may appropriately mitigate effects dependent on the development of both industries. This includes ongoing investigations within the offshore renewable industry, and in consultation with the fishing industry, to explore potential modifications to bottom towed scallop fishing gear which may reduce the mutual risk posed by fishing activities within and around operational wind farms. These investigations may result in mitigation to ascertain the effects described above. Trials are anticipated to be carried out during 2012 and if successful discussion will continue. MORL are committed to carrying out scallop trials provided they are supported by the scallop industry and continue to be of potential benefit. MORL has sought the views of the scallop sector's members and the SFF on the proposed methodology.	Following extensive engagement by Moray East with stakeholders including MSS, The Crown Estate, SFF and the Scallop Association it was established through MFOWDG-CFWG that investigations into alternative gear were not deemed necessary. Moray East have committed to the funding two PhD studentships at Heriot-Watt University into	Commercial Fisheries	Licence Condition	Section 36 condition 31 (MFOWDG-CFWG)

Commitment	Post Moray East ES 2012 Updates	Discipline	Compliance Strategy	Compliance Details
	scallop populations in the north east. These proposals were developed in consultation with various stakeholders including the SFF and SWFPA.			
In line with standard industry practice, dialogue will be ongoing prior to and during the construction phase to ensure that Project information is effectively disseminated to fishermen, as well as allowing for issues to be raised by the fishing community. Working practices will also be agreed to achieve any possible reduction in interference (e.g. standard navigation routes to / from Sites).	The Moray Firth Fisheries Working Group will continue throughout the pre-construction, construction, operational and decommissioning phases of the projects and will be the best way in which to ensure this is achieved.	Commercial Fisheries	Licence Condition	Section 36 condition 31 (MFOWDG-CFWG)
During the construction, operation and decommissioning phases of the developments, a number of industry standard mitigation measures will be in place and these are listed below: • Marine Aids to Navigation (AtoNs) will be provided in in accordance with NLB requirements, which will comply with IALA standard O-139 on the Marking of Offshore Wind Farms (IALA, 2008); • Marking of wind farm structures (and cabling) on appropriate scale admiralty charts by the UKHO; • Promulgation of information and appropriate liaison. This ensures information on the wind farm projects and special activities is circulated in NtMs, navigation information broadcasts and other appropriate media to allow vessels to effectively and safely navigate around the proposed Site;		Shipping and Navigation	Licence Condition & Project Procedures	Section 36 condition 17 (NSP), Marine Coordination Project Procedure

Commitment	Post Moray East ES 2012 Updates	Discipline	Compliance Strategy	Compliance Details
• The SAR ERCoP will be developed and put in place for the construction, operation and the decommissioning phases of the wind farm developments; and • An Active Safety Management System (ASMS) will be developed to ensure the effective coordination of emergency response at the proposed Sites. It will be designed to ensure that the risks related to marine operations (construction, operation / maintenance and decommissioning) specific to the Project are managed carefully and over the long term.				
Notification of physical obstructions to NATS Aeronautical Information Service (AIS) for addition in to appropriate aviation related documentation and on to aviation mapping. i.e. location of constructed turbines and location/movement and maximum height of construction infrastructure. Mitigation remains in operation whilst any turbines remain operational.		Military and Civil Aviation	Licence Condition	Section 36 condition 19 (LMP), WF ML condition 3.2.1.3, 3.2.2.4, 3.2.3.4
During the construction, operation and decommissioning phases of the Project, industry standard mitigation in the form of obstruction lighting will be in accordance with Article 220 of the UK Air Navigation Order (ANO).	Superseded by s.36 condition 19.	Military and Civil Aviation	Licence Condition	Section 36 condition 19 (LMP)
Where cultural heritage assets may potentially be subject to direct or secondary effects, infrastructure will be micro–sited and temporary exclusion zones will be implemented during construction and operation and maintenance to prevent invasive activities, such as WTG and cable installation and maintenance, and anchoring or deployment of jack–up legs. Exclusion zones of at least 100 m will be established around sites identified as being of high sensitivity in this assessment (HW 1001, 1002, 1004, 157; 158 and 159); while an exclusion zone of a minimum 50 m will be established around those of medium sensitivity (HW1014, 1015, HW 36; 44; 52; 61; 71; 72; 73; 74; 75; 76; 77; 78; 80; 100; 102; 108, 117,1015 and 1016). As per construction, decommissioning activities will avoid cultural heritage assets through the implementation of temporary exclusion zones. In order to mitigate the risk of damage to any previously unrecorded archaeological remains, a WSI and PAD will be employed during decommissioning.		Archaeology	Licence Condition and Project Procedures	Section 36 condition 35 (PAD), Project Description
Wind farm infrastructure will not be sited within 50 m of existing abandoned well heads.		Other human activities	Project Procedures	Project Description

Commitment	Post Moray East ES 2012 Updates	Discipline	Compliance Strategy	Compliance Details
MORL will ensure that all practicable mitigation measures to minimise the risk of health and safety incidents associated with UXO are fully developed prior to construction. A UXO Site survey will be undertaken prior to construction and Site safety instructions will be prepared in the event that an item of UXO is located. All contractors' staff will be given munitions awareness briefings prior to and during the construction work. Should suspected items of UXO be discovered, their location will be accurately mapped and recorded for future assessment and possible removal / disposal or remediation in situ by a specialist contractor.		Other human activities	Project Procedures	Project Description
Pre-Construction				
Before construction is undertaken a side scan sonar survey across the area of development and any vessel access routes from UK local service ports to the construction site will be undertaken. A fisherman's representative will be allowed to attend the survey. Any obstructions to be recorded on a chart.		Offshore Physical Environment	Licence Condition	Section 36 condition 14 (EMP), WF ML condition 3.2.2.1
Pre-construction monitoring surveys for marine mammals and birds will be carried out within the wind farm Site and buffer area. An Ornithological and Marine Mammal Monitoring Plan will need to be agreed prior to this monitoring commencing.	Although it was stated that boat-based surveys would be carried out the scope of monitoring has been updated as per discussions through MFRAG.	Marine Mammals and Ornithology	Licence Condition	Section 36 condition 26 (PEMP)
Implementation and integration of a technical radar mitigation solution will be agreed prior to construction.		Military and Civil Aviation	Licence Condition	Section 36 condition 20, 21 & 22
A number of mitigation options are being discussed with the Moray Firth helicopter operators, (as detailed in Technical Appendix 5.3 B) and an acceptable mitigation solution for operation flights and safety cases will be agreed prior to construction.		Military and Civil Aviation	Licence Condition	Section 36 condition 20, 21 & 22
Detailed schedule of planned construction and monitoring - Detailed construction works method statement which confirms final choices of materials and volumes to be used.		Project management	Licence Condition	Section 36 condition 10 (CMS),

Commitment	Post Moray East ES 2012 Updates	Discipline	Compliance Strategy	Compliance Details
				WF ML condition 3.2.2.2 (transportation audit report)
Transportation audit sheet will be produced providing details of numbers and types of vessels, routes, etc for all aspects of construction.		Project management	Licence Condition	WF ML condition 3.2.2.1 (*replaced with condition 3.2.2.2*)
Ecotoxicogical hazard/risk assessment will be undertaken - Where chemicals to be used are not on the List of Notified Chemicals (Offshore Chemicals Regulations, 2002).		Project management	Licence Condition	Section 36 condition 14 (EMP)
Project EMP will be produced - Final EMP including EMMP, Marine Pollution Contingency Plan, Scour Management Plan, Marine Mammal Mitigation Plan, Protocol for Archaeological Discoveries and Protocol for Fisheries Liaison.		Project management	Licence Condition	Section 36 condition 14 (EMP), condition 26 (PEMP), condition 31 (CFOWDG-CFMS), condition 35 (PAD), MPCP (WF ML Condition 3.1.12) & Section 36 condition 11 (Piling Strategy)
Construction				
In order to validate underwater noise models applied during EIA, subsea noise generated during piling will be measured at various frequencies and locations within and around the WTG array. Sample locations will reflect differences in water depths and sediment types within the Site.		Underwater noise	Licence Condition	Section 36 condition 11 (Piling Strategy) and condition 26 (PEMP)
Construction monitoring surveys for marine mammals and birds will be carried out within the wind farm Sites and buffer area. An Ornithological and Marine Mammal Monitoring Plan will need to be agreed prior to this monitoring commencing.	Although it was stated that boat-based surveys would be carried out, the scope of monitoring has been updated as per discussions through MFRAG. Ornithology monitoring during construction not	Marine mammals and ornithology	Licence Condition	Section 36 condition 26 (PEMP)

Commitment	Post Moray East ES 2012 Updates	Discipline	Compliance Strategy	Compliance Details
	required as per agreement reached through MFRAG-O.			
In addition to the monitoring / mitigation above, soft start piling will be used during construction with the aim that mobile species are not exposed to the highest noise levels.		Fish and Shellfish Ecology	Licence Condition	Section 36 condition 11 (Piling Strategy)
Existing JNCC guidelines (2017) require the presence of a marine mammal observer prior to piling commencing and the instigation of a "soft start" procedure once piling starts. Typically this involves a 30 minute visual watch being conducted prior to all piling operations along with a 30 minute acoustic survey. If a marine mammal is observed (visually or acoustically) within 500 m of the piling vessel during this period, piling is delayed until the animal has moved away from the area (outside of the 500 m buffer) or has not been sighted for 20 minutes.	A Marine Mammal Mitigation Plan, based on current JNCC guidance and industry best practice, has been agreed with MS-LOT and Stakeholders. This includes the use of trained MMOs and PAM, Acoustic Deterrent Devices (ADDs) and soft-start procedures during all piling activities. A 500m monitoring zone will be implemented during the phased piling mitigation strategy period. Full details are provided in the Piling Strategy.	Marine mammals	Licence Condition	Section 36 condition 11 (Piling Strategy)
All infrastructure installed during the construction phase will be marked and lit, in line with standard industry practice. The information will be distributed to fishermen through the agreed channels as defined in the construction management programme.		Commercial Fisheries	Licence Condition	Section 36 condition 19 (LMP), WF ML condition 3.2.1.3, 3.2.2.4, 3.2.3.4

Commitment	Post Moray East ES 2012 Updates	Discipline	Compliance Strategy	Compliance Details
Cables will be buried to a target depth of 0 to 1 m where it is technically practical to do so. In instances where adequate burial cannot be achieved then cable protection will be installed. Over trawl surveys will be carried out on inter array cables to ensure that the cable burial and protection scheme has been successful.		Commercial Fisheries	Licence Condition	Section 36 condition, 18 (CaP) & 31 (MFOWDG-CFWG)
During the construction phase, NtMs, Radio Navigational Warnings, NAVTEX and / or broadcast warnings as well as Notices to Airmen will be promulgated in advance of any proposed works, where required.		Shipping and Navigation	Licence Condition	WF ML condition 3.2.1.3, 3.2.2.3
Safety zones will be in place around each turbine and construction vessels during the construction phase in order to minimise disruption to mariners and other users of the sea. These 500 m exclusion zones would be applied for in line with DECC guidance (DECC, 2011.) Guard vessels may be used to monitor passing vessels and warn / record any safety zone infringements. Safety Zones are likely to be established on a 'rolling' basis, covering only those areas of the wind farms in which such activities are actually taking place at a given time. Once that activity has been completed in that specific location, the safety zone will then 'roll on' to cover the next specific location within the Site in which such activity is taking place.	DECC is now known as BEIS (Business, Energy and Industrial Strategy) The Safety zones and any other relevant aspects will reflect the latest guidance.	Shipping and Navigation	Licence Condition & Safety Zones licence	Section 36 condition 17 (NSP)
In order to mitigate the risk of damage to any previously unrecorded archaeological remains, a WSI and PAD will be prepared for the approval of Historic Scotland and Highland Council Historic Environment Team (HCHET) to mitigate construction effects in the event of any unexpected archaeological discoveries during installation (see Technical Appendix 1.3 A: EMP for further detail).	Historic Scotland is now known as Historic Environment Scotland (HES)	Archaeology	Licence Condition & Project Procedures	Section 36 condition 35 (PAD), Project Description
There are a number of mitigation measures that will be implemented to reduce the risk of any effects on other human activities occurring; these are as follows: • To ensure the safety of all MORL assets, offshore wind farm infrastructure will not be sited within 50 m of existing abandoned oil well heads. • MORL will continue to engage with current oil and gas block Licence holders in order to firstly understand their exploration plans, and secondly to limit any conflicts of interest and achieve co–existence where possible.		Other human activities	Project Procedures & Project Management	Project Description

Commitment	Post Moray East ES 2012 Updates	Discipline	Compliance Strategy	Compliance Details
MORL is actively engaged in ongoing discussions at industry level with RenewableUK, Oil and Gas UK, and the Department of Energy and Climate Change (DECC), which are aiming to develop a protocol by which any conflicts of interest between the offshore wind, oil and gas industries may be amicably resolved. • Although the Health & Safety at Work Act 1974 and the Construction (Design and Management) Regulations 2007 do not specifically require a dedicated UXO assessment, there is an obligation on those responsible for intrusive works to ensure that a comprehensive threat assessment is undertaken and risk mitigation measures are implemented with regard to all hazards on site. MORL will ensure that all practicable mitigation measures to minimise the risk of health and safety incidents associated with UXO are fully developed prior to construction. A UXO Site survey will be undertaken prior to construction and Site safety instructions will be prepared in the event that an item of UXO is located. All contractors' staff will be given munitions awareness briefings prior to and during the construction work. Should suspected items of UXO be discovered, their location will be accurately mapped and recorded for future assessment and possible removal / disposal or remediation in situ by a specialist contractor. The MoD and emergency services will also be consulted as appropriate.				
Operation				
Offshore generating station infrastructure will be suitably monitored for unintended exposure if previously buried and for unwanted scour if exposed above the seabed. Scour protection may be applied to turbine foundations or to sections of cable that would otherwise be exposed at the seabed surface. Cable protection has dual purposes in both preventing scour and protecting the cable from external damage. The width of seabed about cable routes and the area around foundations potentially affected by either scour or protection materials is generally similar.		Offshore Physical Environment	Licence Condition	Section 36 condition 26 (PEMP) & condition 18 (CaP)
Post-construction monitoring surveys for marine mammals and birds within the wind farm Sites and buffer area. An Ornithological and Marine Mammal Monitoring Plan will need to be agreed prior to this monitoring commencing.	Although it was stated that boat-based surveys would be carried out the	Marine mammals and ornithology	Licence Condition	Section 36 condition 26 (PEMP)

Commitment	Post Moray East ES 2012 Updates	Discipline	Compliance Strategy	Compliance Details
	scope of monitoring has been updated as per discussions through MFRAG.			
In order for there to be ongoing dialogue between MORL and the fishing industry throughout the operational phase of the wind farm and offshore transmissions works, the working group will continue to provide a forum for ongoing engagement.		Commercial Fisheries	Licence Condition	Section 36 condition 31 (MFOWDG-CFWG)
During the operational phase of the projects it is expected that a Marine Control/Coordination Centre will be developed to monitor and coordinate marine activities in and around the Site. Such a centre will meet the requirements outlined in MGN 371.	MCC has been established at Fraserburgh	Shipping and Navigation	Licence Condition & Project Procedures	Section 36 condition 17 (NSP) Marine Coordination Project Procedure
During the operational phase of the Projects it is expected that a Marine Control / Coordination Centre will be developed to monitor and coordinate marine activities in and around the Site. Such a centre will meet the requirements outlined in MGN 371: - The Marine Control Centre, or mutually agreed single contact point, will be manned 24 hours a day; - The Marine Control Centre operator, or mutually agreed single contact point, will have a chart indicating the GPS position and unique identification numbers of each of the wind farm structures. • All Marine Rescue Coordination Centres (MRCCs) / MRSCs will be advised of the contact telephone number of the Marine Control Centre, or single contact point (and vice versa); • All MRCCs / MRSCs will have a chart indicating the GPS position and unique identification number of each of the wind farm structures (turbines and offshore substations); • All search and rescue helicopter bases will be supplied with an accurate chart of all the wind farm structures and their GPS positions; and • The CAA shall be supplied with accurate GPS positions of all wind farm structures for civil aviation navigation charting purposes.	MCC has been established at Fraserburgh	Shipping and Navigation	Licence Condition & Project Procedures	Section 36 condition 17 (NSP); Marine Coordination Procedure

Commitment	Post Moray East ES 2012 Updates	Discipline	Compliance Strategy	Compliance Details
As per mitigation during construction and decommissioning phases, MORL will continue to engage with oil and gas operators to achieve co–existence where possible.		Other Human Activities	Project Management	
Decommissioning				
A decommissioning programme in line with standard requirements will be developed and the existing ERCoP and associated safety procedures will be reviewed accordingly.		Shipping and Navigation	Licence Condition	Section 36 condition 3 (DP)
Promulgation of information and appropriate liaison will be carried out prior to decommissioning works and 500 m 'rolling' safety zones are expected to be in place around each turbine and major construction vessel.		Shipping and Navigation	Licence Condition	Section 36 condition 3 (DP)

Table A VII-2: OfTI Commitments (Mod TI ES 2014)

Commitment	Post Moray East ES 2014 Updates	Discipline	Compliance Strategy	Compliance Details
All Project Phases				
As part of existing commitments for the three consented MORL wind farm Sites (Scottish Government 2014) vessel traffic will be along set routes during all phases where possible, thus increasing the likelihood of habituation to disturbance. Further mitigation and monitoring measures in addition to this embedded mitigation are not proposed. Since all potential effects were considered to be not significant, this is still the case post-mitigation.		Ornithology	Licence condition	OFTO ML condition 3.2.2.8 (VMP)
Engagement with the creel fishery for offshore surveys has already been undertaken and gear removal successfully negotiated to reduce interference to those fishing activities. This engagement will continue into the construction, operation and decommissioning phases.		Commercial Fisheries	Licence condition	OFTO ML condition 3.2.1.4 (MFOWDG-CFWG)
The Moray Firth Commercial Fisheries Working Group (MFCFWG) has been established and will continue to facilitate future engagement with the fishing industry. Working practices will also be agreed to achieve any possible reduction in interference. A construction management plan will be defined in		Commercial Fisheries	Licence condition	OFTO ML condition 3.2.1.4 (MFOWDG-CFWG)

Commitment	Post Moray East ES 2014 Updates	Discipline	Compliance Strategy	Compliance Details
consultation with fishing interests which clearly establishes protocol for engagement between MORLand fishermen throughout the construction period. Where necessary, a mitigation strategy will be devised through the means of the MFCFWG. MORL has committed to a draft CFMS as part of the applications for the Project (i.e. the three consented wind farms and export cable route to Fraserburgh). This strategy is referred to in the conditions in the Section 36 consents for the three wind farms and addresses both wind farm and transmission infrastructure.				
MORL will continue to facilitate ongoing dialogue throughout the pre-construction, construction and operational phases of the development, which will continue to discuss the mitigation options under investigation, as well as defining the protocol for engagement during the construction and operation phases.		Commercial Fisheries	Licence condition	OFTO ML condition 3.2.1.4 (MFOWDG-CFWG)
In line with standard industry practice, dialogue will be ongoing with fishermen prior to and during the construction and operational phases to ensure that project information is effectively disseminated to fishermen, as well as allowing for issues to be raised by the fishing community. This will be assisted by Fishing Industry Representatives (FIRs) and a FLO. Additionally, all information regarding activities at sea will be disseminated through NtMs published in Kingfisher and distributed to the wider fishing community.		Commercial Fisheries	Licence condition	OFTO ML condition 3.2.1.4 (MFOWDG-CFWG), condition 3.2.2.13 (FLO) & condition 3.2.2.14
The following embedded mitigation will be implemented for Shipping and Navigation purposes: • Burial of the cable to a minimum of 1m and/or protection; • AtoNs as required by NLB; • Charting of cables as per UKHO requirements; • Compliance with MGN 371; • Construction safety zones; • Monitoring – depth and coverage surveys during the operational phase of the cables; and • NtMs.		Shipping and Navigation	Licence condition & Project Procedures	OFTO ML condition 3.2.2.9 (NSP), condition 3.2.2.10 (CaP), condition 3.2.2.14 Marine Coordination Project Procedure
Health and Safety Risk Associated with Unexploded Ordnance		Other Human Activities	Licence condition	OFTO ML condition 3.2.1.2 (EMP)

Commitment	Post Moray East ES 2014 Updates	Discipline	Compliance Strategy	Compliance Details
Although the Health & Safety at Work Act 1974 and the Construction (Design and Management) Regulations 2007 do not specifically require a dedicated UXO assessment, there is an obligation on those responsible for intrusive works to ensure that a comprehensive threat assessment is undertaken and risk mitigation measures are implemented with regard to all hazards on site. MORL will ensure that all practicable mitigation measures to minimise the risk of health and safety incidents associated with UXO are fully developed prior to construction. A UXO Site survey will be undertaken prior to construction, where it is considered to be likely that UXO will be encountered, and Site safety instructions will be prepared in the event that an item of UXO is located. All contractors' staff will be given munitions awareness briefings prior to and during the construction work. Should suspected items of UXO be discovered, their location will be accurately mapped and recorded for future assessment and possible removal / disposal or remediation in situ by a specialist contractor. The Ministry of Defence and emergency services will also be consulted as appropriate. As per mitigation during construction and decommissioning phases, MORL will implement the best practice measures where intrusive maintenance works are required.				
MORL will continue to engage with developers and operators with interests in the vicinity of the modified OfTI in order to share plans and programmes before, during and after the installation of the OSPs and export cable. This engagement will continue throughout the operational life of the modified OfTI and into decommissioning. Such engagement will limit any conflicts of interest and achieve co–existence where possible.		Other Human Activities	Project Management	
Pre-Construction				
MORL is committed to continuing the exploration and development of mitigation options in consultation with the fishing industry. At the current time, MORL is proposing to undertake fishing trials using modified scallop dredge gear with a view to identifying enhancements to traditional scallop fishing practices that may be of benefit to both the developer and the scallop fleet. At present Bangor University is preparing a feasibility report for these	Following extensive engagement by Moray East with stakeholders including MSS, The Crown Estate, SFF and the Scallop Association it was established through	Commercial Fisheries	Licence condition	OFTO ML condition 3.2.1.4 (MFOWDG-CFWG)

Commitment	Post Moray East ES 2014 Updates	Discipline	Compliance Strategy	Compliance Details
trials which will be consulted on with the scallop industry during the summer of 2014.	MFOWDG-CFWG that investigations into alternative gear were not deemed necessary. Moray East have committed to the funding two PhD studentships at Heriot-Watt University into scallop populations in the north east. These proposals were developed in consultation with various stakeholders including the SFF and SWFPA.			
Construction				
Development of and adherence to the EMP compliant with ISO14001 or BSA 555, will limit the risk of accidental spillages or releases occurring and to ensure that adequate contingency is in place (i.e. spill plan) to resolve any incidents quickly. Measures to avoid or minimise adverse effects on marine life are identified within the EMP.		Benthic Ecology	Licence condition	OFTO ML condition 3.2.1.2 (EMP)
The development and adherence to a protocol to minimise risk of introducing MINNS via attachment to marine plant and/or specialised equipment is recommended by SEPA (MORL, 2012 Chapter 4.2 Benthic Ecology). This may include regular hull cleaning of construction vessels, maintenance of anti-fouling systems and BWM as part of vessel normal operating procedures.		Benthic Ecology	Licence condition	OFTO ML condition 3.2.1.2 (EMP)
The use of best practice to minimise the quantities of scour and cable protection material will reduce loss of original seabed habitat and habitat change.		Benthic Ecology	Licence condition	OFTO ML condition 3.2.1.2 (EMP) & condition 3.2.2.10 (CaP)

Commitment	Post Moray East ES 2014 Updates	Discipline	Compliance Strategy	Compliance Details
In order that mobile species are not exposed to the highest noise levels during piling, 'soft start' methods will be employed for installation of the OSP foundations. Further details to be provided within the Piling Strategy.		Fish and Shellfish Ecology	Licence condition	OFTO ML condition 3.2.2.5 (Piling Strategy)
Existing Joint Nature Conservation Committee (JNCC) guidelines require the presence of a marine mammal observer prior to piling commencing and the instigation of a "soft start" procedure once piling starts. Typically this involves a 30 minute visual watch being conducted prior to all piling operations along with a 30 minute acoustic survey. If a marine mammal is observed (visually or acoustically) within 500 m of the piling vessel during this period, piling is delayed until the animal has moved away from the area (outside of the 500 m buffer) or has not been sighted for 20 minutes.	A Marine Mammal Mitigation Plan, based on current JNCC guidance and industry best practice, has been agreed with MS-LOT and Stakeholders. This includes the use of trained MMOs PAM,, Acoustic Deterent Devices (ADDs) and soft-start procedures during all piling activities. A 500m monitoring zone will be implemented during the phased piling mitigation strategy period. Full details are provided in the Piling Strategy.	Marine Mammals	Licence condition	OFTO ML condition 3.2.2.5 (Piling Strategy)
The risk to marine mammals of collision with construction vessels is predicted to be negligible and of low significance. Although mitigation is not considered a necessity, the designation of a navigational route for construction vessel traffic will aid marine mammals to predict vessel movement and reduce potential impacts.		Marine Mammals	Licence condition	OFTO ML condition 3.2.2.8 (VMP)
Cables will be buried to a target depth of 1 m, where it is technically practicable to do so, which will reduce the risk to fishing vessels from snagging. In instances where adequate burial cannot be achieved an appropriate cable protection will be used. Over-trawlability surveys will be undertaken as necessary along areas of the cable route where potential snagging risks (such		Commercial Fisheries	Licence condition	OFTO ML condition 3.2.2.10 (CaP)

Commitment	Post Moray East ES 2014 Updates	Discipline	Compliance Strategy	Compliance Details
as clay berms) could be located, to reduce risks to the vessels operating trawled gear. Fishing vessels have previously been used to undertake surveys in the area and it is feasible that this will continue throughout all phases of development.				
One of the construction/installation vessels will be tasked with vessel monitoring and guard duties to monitor passing vessels and warn / contact errant vessels headed towards offshore transmission works or vessels restricted in manoeuvrability associated with the project.		Shipping and Navigation	Licence condition & Project Procedures	OFTO ML condition 3.2.2.8 (VMP) Marine Coordination Project Procedure
Avoidance of known undesignated cultural heritage assets by micrositing where possible within the modified OfTI export cable route corridor.		Archaeology and Cultural Heritage	Licence condition	OFTO ML condition 3.2.2.16 (MARP)
Mitigation in respect of previously identified geophysical anomalies (MORL 2012: HAID 40, 42) will depend upon whether they are re-located during the assessment of geophysical data – within the modified OfTI export cable corridor.		Archaeology and Cultural Heritage	Licence condition	OFTO ML condition 3.2.2.16 (MARP)
Geophysical and geotechnical datasets being acquired for the modified OfTI will be subject to archaeological assessment enhancing the WSI comprising an agreed program of Works in consultation with curators. The modified OfTI design, and mitigation measures will be reported on pre-construction.		Archaeology and Cultural Heritage	Licence condition	OFTO ML condition 3.2.2.16 (MARP)
Following completion of geophysical and geotechnical assessment, a WSI will be prepared in consultation with Aberdeenshire Council and Historic Scotland – reviewing and updating the existing WSI included as part of the 2012 MORL ES (Technical Appendix 1.3 A of MORL ES, 2012). This WSI will be compliant with existing archaeological guidance (specifically The Crown Estate/Wessex Archaeology 2010a) and should apply to all construction, operation and decommissioning activities with potential to have an effect upon cultural heritage receptors. It should be incorporated into the final EMP for the modified OfTI and OnTI. The WSI will set out: • When, how, why and by whom archaeological mitigation measures are to be implemented (including archaeological exclusion zones and buffers and micro-siting allowances); and		Archaeology and Cultural Heritage	Licence condition	OFTO ML condition 3.2.2.16 (MARP)

Commitment	Post Moray East ES 2014 Updates	Discipline	Compliance Strategy	Compliance Details
• Provide for the appointment of a retained archaeologist to carry out and/or co-ordinate archaeological mitigation activities and to monitor compliance with the WSI during construction.				
All construction, operation and decommissioning activities will be subject to a scheme-specific protocol document for dealing with archaeological discoveries. This will be compliant with existing archaeological guidance (specifically The Crown Estate/Wessex Archaeology, 2010b) and incorporated into the WSI (in line with the draft WSI included within Technical Appendix 1.3 A of the MORL ES, 2012). Compliance with the protocol will be monitored by the retained archaeologist during construction and installation.		Archaeology and Cultural Heritage	Licence condition	OFTO ML condition 3.2.2.16 (MARP)
The preferred method of mitigation for cultural heritage assets is avoidance. Exclusion Zones will be placed around all discrete archaeological sites or more extensive areas identified within an EIA prohibit development related activities within their extents and have been widely applied in offshore contexts to sites and anomalies with known or potential archaeological significance. In view of their potential archaeological significance, development exclusion zones will be placed around WA 2000-2008. Although these receptors have been classified as 'Dead' or have substantial positional uncertainties, remains may still be present; either fragmentary or buried within the modified OfTI ASA. A minimum exclusion zone of 50 m around each of these receptors will be implemented, pending further clarification on the presence or not of any remains through the assessment of the marine geophysical data. The WSI will also set out Exclusion Zones in relation to the OSPs located within the consented wind farm area in cognisance with the baseline previously assessed (MORL ES, 2012).		Archaeology and Cultural Heritage	Licence condition & Project Procedures	OFTO ML condition 3.2.2.16 (MARP) Project Description
It is proposed that all exclusion zones will be marked on the scheme masterplans, including contract documents. The final modified OfTI will take account of these buffers, which may evolve as the project progresses subject to scheme design and survey requirements. If effects cannot be avoided measures to reduce, remedy or offset disturbance will be set out in a WSI agreed with HS as outlined below.		Archaeology and Cultural Heritage	Licence condition & Project Procedures	OFTO ML condition 3.2.2.16 (MARP) Project Description

Commitment	Post Moray East ES 2014 Updates	Discipline	Compliance Strategy	Compliance Details
There are a number of mitigation measures that will be implemented as part of standard industry best practice that will serve to lower the risk of any impact on subsea cables. Where necessary, cable protection will be used to ensure future cable integrity and to separate sections of cable from potential risks (e.g. the risk of anchor penetration in areas where cable burial depth is restricted by geology).		Other Human Activities	Licence condition	OFTO ML condition 3.2.2.10 (CaP)
MORL has been actively engaged in ongoing discussions at industry level with RenewableUK, Oil and Gas UK and the Department of Energy and Climate Change (DECC), aiming to develop a protocol by which any conflicts of interest between the offshore wind, oil and gas industries may be amicably resolved. MORL note that DECC, as of June 2014, have published a detailed framework that would be used to satisfactorily resolve any conflicts of interest between offshore wind developers and oil and gas operators (RenewableUK, 2014).		Other Human Activities	Project Management	
Consultation has been undertaken with Faroese Telecom (the operator of the SHEFA–2 cable) and they have not raised an objection to the MORL Project. Further discussions will result in cable crossing / proximity agreements being secured which will include detailed crossing conditions and methodology. Faroese Telecom will also be notified of any MORL works within 1,000 m of the SHEFA–2 cable.		Other Human Activities	Project Management	
MORL, as part of the Connections Infrastructure Options Note (CION) process in 2013, and later as part of an ongoing initiative with SHE-T and National Grid, meets with both entities on a monthly basis in order to progress the grid connection and OFTO infrastructure. Since signature of the connection agreement at New Deer, SHE-T and National Grid have been informed on a monthly basis of the progress which is being made associated with the modified OfTI. This engagement will continue through to the construction phase for both MORL and SHE-T TI assets.		Other Human Activities	Project Management	
Operation				
During operation, the export cable will be monitored to ensure that cables remain buried and any scour effects remain within the range of that predicted in the ES.		Hydrodynamics, Sedimentary and Coastal Processes	Licence condition	OFTO ML condition 3.2.1.1 (PEMP) [please note compliance

Commitment	Post Moray East ES 2014 Updates	Discipline	Compliance Strategy	Compliance Details
				responsibilities passed on to the OFTO post construction]
Where burial depth cannot be achieved, cable armouring will be implemented (e.g. rock placement or concrete mattressing). The suitability of installing rock or concrete mattresses for cable protection, especially around the structure bases, will be assessed based on the seabed current data across the proposed development area and the assessed risk of impact damage.		Hydrodynamics, Sedimentary and Coastal Processes	Licence condition	OFTO ML condition 3.2.2.10 (CaP)
Adherence to the EMP will limit the risk of accidental spillages or releases occurring and ensure that adequate contingency is in place to resolve any incidents quickly.		Benthic Ecology	Licence condition	OFTO ML condition 3.2.1.2 (EMP) [please note compliance responsibilities passed on to the OFTO post construction]
Cable burial will reduce exposure of electromagnetically sensitive species to the strongest Electromagnetic Fields (EMFs)that exist at the “skin” of the cable owing to the physical barrier of the substratum (OSPAR, 2008). Where burial is not feasible, cable protection will ensure that fish and shellfish receptors are not in direct contact with the cable and will not be exposed to the strongest EMFs.		Fish and Shellfish Ecology	Licence condition	OFTO ML condition 3.2.2.10 (CaP) [please note compliance responsibilities passed on to the OFTO post construction]
The risk to marine mammals of collision with operational and maintenance vessels is predicted to be negligible and of low significance. Although mitigation is not considered a necessity, the designation of a navigational route for operation and maintenance vessel traffic will aid marine mammals to predict vessel movement and reduce potential effects.		Marine Mammals	Licence condition	OFTO ML condition 3.2.2.8 (VMP) & condition 3.2.3.2 (OMP) [please note compliance responsibilities passed on to the OFTO post construction]

Commitment	Post Moray East ES 2014 Updates	Discipline	Compliance Strategy	Compliance Details
Sections of the cable route identified to be high risk areas from anchoring and fishing activity will be buried to a suitable depth to protect against vessel anchors and fishing gear. Where a suitable burial depth is unachievable, the cables will be protected with concrete mattresses and / or rock placement. Following installation, the cables' over-trawlability will also be tested.		Shipping and Navigation	Licence condition	OFTO ML condition 3.2.2.10 (CaP) [please note compliance responsibilities passed on to the OFTO post construction]
Periodic and planned surveys of the export cable routes will be carried out to monitor burial depths / protection and seabed mobility.		Shipping and Navigation	Licence condition	OFTO ML condition 3.2.2.10 (CaP) [please note compliance responsibilities passed on to the OFTO post construction]
A Marine Control Centre is being considered as part of the three consented wind farm Sites and monitoring could be extended to cover the modified export cable route to shore (i.e. to monitor any vessels anchoring in proximity to the cable route). Further consideration of vessel monitoring in proximity to the cable route will take place during construction / installation planning.	MCC has been established at Fraserburgh	Shipping and Navigation	Licence Condition & Project Procedures	OFTO ML condition 3.2.2.9 (NSP) Marine Coordination Procedure [please note compliance responsibilities passed on to the OFTO post construction]
Damage to Subsea Cables - The future arrangements made in any cable crossing agreement with Faroese Telecom, SHE-T and any other operators will serve to reduce the likelihood for effect.		Other Human Activities	Project Management	[please note compliance responsibilities passed on to the OFTO post construction]

Commitment	Post Moray East ES 2014 Updates	Discipline	Compliance Strategy	Compliance Details
Effects on military activity - In adhering to the conditions attached to any consent for the modified OfTI in relation to the lighting, marking and charting of infrastructure, MORL will ensure that the operational OfTI (specifically the OSPs) does not interfere with military activity.		Other Human Activities	Licence condition	OFTO ML condition 3.2.3.2 (OMP) & condition 3.2.2.14 [please note compliance responsibilities passed on to the OFTO post construction]
Effects on oil and gas activity and infrastructure - As per mitigation during construction and decommissioning phases, MORL will continue to engage with oil and gas operators to achieve co–existence where possible and adhere to standard industry guidance in resolving any conflicts of interest.		Other Human Activities	Licence condition	OFTO ML condition 3.2.3.2 (OMP) & condition 3.2.2.14 [please note compliance responsibilities passed on to the OFTO post construction]
Decommissioning				
A decommissioning plan will be developed and agreed with the relevant authority on decommissioning. Adherence to the EMP will limit the risk of accidental spillages or releases occurring or ensure that adequate contingency is in place to resolve any incidents quickly.		Benthic Ecology	Licence condition	OFTO ML condition 3.2.2.2 (DP) & condition 3.2.1.2 (EMP)
The decommissioning programme has not yet been finalised and will be dependent on the choice of foundation structure, therefore a detailed mitigation proposal is not possible at this stage. The most likely scenario would involve the use of cutting equipment and is predicted to be of low to medium magnitude of effect to marine mammals. Once the decommissioning programme has been decided upon, a review of mitigation requirements will be undertaken and instigated as required based on the best available procedures at the time.		Marine Mammals	Licence condition	OFTO ML condition 3.2.2.2 (DP)
The mitigation measures associated with decommissioning the export cables are anticipated to be similar to those identified for the construction phase;		Shipping and Navigation	Licence condition	OFTO ML condition 3.2.2.2 (DP)

Commitment	Post Moray East ES 2014 Updates	Discipline	Compliance Strategy	Compliance Details
however measures will also be dependent on the method of decommissioning (i.e. complete removal of export cables or leave the cable(s) buried in the seabed).				
A decommissioning plan in line with standard requirements will be developed and this is likely to lead to a revision of the existing ERCoP and associated safety procedures.		Shipping and Navigation	Licence condition	OFTO ML condition 3.2.2.2 (DP)
Promulgation of information and appropriate liaison with marine stakeholders will be carried out prior to decommissioning works.		Shipping and Navigation	Licence condition	OFTO ML condition 3.2.2.2 (DP)

Table A VII-3: OSP Marine Licence Application Documents 2017 Commitments

Commitment	Post Moray East ML Application Documents 2017 Updates	Discipline	Compliance Strategy	Compliance Details
All Project Phases				
Although the number of OSPs is higher than the original permitted design, the actual footprint and overall design parameters of four Distributed OSPs are still within the original project parameters assessed in 2014 for the two AC OSPs. This is on the assumption that the two OSPs permitted under the modified OfTI ML 2014 are no larger than the two OSPs for which consent is sought under the current ML application.		All	Licence Condition	OSP ML 3.2.2.6 (DSLP)
In terms of the Modified OfTI ML 2014 the two AC OSPs can be installed within any of the Telford, Stevenson and MacColl offshore wind farm Sites (Figure 2-1). The two additional Distributed OSPs would also be located within the same area as shown in Figure 2-2 of the Environmental Report 2017.		All	Licence Condition	OSP ML 3.2.2.6 (DSLP)
The number and type of vessels to be utilised for the installation and operation of the OSPs is not yet known but will be consistent with the original assessments (please see Section 4.3.1.68 to 4.3.1.70 of the Modified TI ES 2014 for details)		All	Licence Condition	OSP ML 3.2.2.8 (VMP)
Decommissioning				
A decommissioning programme will be prepared in accordance with relevant legislation and guidance available at the time of decommissioning.		All	Licence Condition	OSP ML 3.2.2.2 (DP)

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