

APPENDIX E

Draft (Offshore) Construction Environmental Management Plan (CEMP)

PENTLAND EAST CABLE REPLACEMENT

Construction Environmental Management Plan

Global Offshore Ref No : 2742-GO-G-TB-0005

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GLOBAL MARINE

Pentland Firth East Cable Replacement

Offshore Construction Environmental Management Plan



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DOCUMENT RELEASE FORM

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Pentland Firth East Cable Replacement

Offshore Construction Environmental Management Plan

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GLOSSARY

BWMP

Ballast Water Management Plan

CFLO

Companies Fisheries Liaison Officer

CEMP

Construction Environment Management Plan

DDV

Drop Down Video

EPS

European Protected Species

EPS RA

European Protected Species Risk Assessment

ESI

Environmental Supporting Information

EU

European Union

FIR

Fishing Industry Representative

FLMAP

Fisheries Liaison Mitigation Action Plan

IMO

International Maritime Organisation

JNCC

Joint Nature Conservation Committee

MARPOL

International Convention for the Prevention of Pollution from Ships / Maritime Pollution

MHWS

Mean High Water Spring

MMO

Marine Mammal Observer

MMPP

Marine Mammal Protection Plan

Nm

Nautical mile

NRA

Navigational Risk Assessment

RQHSE

Risk, Quality, Health, Safety and Environment

SAC

Special Area of Conservation

SEPA

Scottish Environmental Protection Agency

SHEPD

Scottish Hydro Electric Power Distribution plc

SNH

Scottish Natural Heritage

SOPEP

Shipboard Oil Pollution Emergency Plan

SPA

Special Protection Area

UAV

Unmanned Aerial Vehicle

UK

United Kingdom

WTN

Waste Transfer Note

1. INTRODUCTION

1.1 Background

- 1.1.1 This offshore Construction Environment Management Plan (CEMP) is for the installation phase of the replacement of the Pentland Firth East 33kV submarine electricity cable between Rackwick Bay on the island of Hoy and Murkle Bay on the Scottish Mainland (the Project) by Scottish Hydro Electric Power Distribution plc (SHEPD, known as the *Employer*). The installation operations will be undertaken by Global Offshore, part of Global Marine Group (GO, known as the *Contractor*).
- 1.1.2 This offshore CEMP sets out the proposed environmental management framework and procedures that will be followed by the *Contractor* during the installation of the cable. It covers all potential effects associated with installation of the cable and all works at the landfall occurring below Mean High Water Springs (MHWS). Given that the cable will be installed across the shore, management of potential impacts on the shore have also been considered or have been referenced to the separate onshore CEMPs. The mitigation measures that are incorporated in the design of the cable in order to prevent or reduce adverse environmental effects as much as possible are discussed separately as part of the Environmental Supporting Information (ESI) Report.

1.2 Objectives of this Document

- 1.2.1 The purpose of this offshore CEMP is to provide the over-arching framework for environmental management during the installation of the replacement subsea cable. It sets out the principles that will be applied by the *Contractor* in implementing their environmental management plans. The works will be undertaken considering the following:
- Relevant legislation as outlined in supporting ESI Report;
 - Relevant policies in the Scottish Marine Plan and Pilot Pentland Firth and Orkney Waters Marine Spatial Plan;
 - Findings of the assessments undertaken to support the Marine Licence application;
 - Any conditions established through the Marine Licence and other relevant licences including the European Protected Species (EPS) Licence and Basking Shark Licence;
 - GO policies and procedures;
 - GO Environmental and Energy Management Document (GMG-E-KA-0001)
 - SHEPD policies and procedures:
 - Sustainability Policy (PO-COR-033);
 - Environment and Climate Change Policy (PO-COR-054);
 - Safety Health and Environmental Organisation Standard (MS-SHE-001);
 - Business Unit SHEPD Requirements (SP-PS-LT-901);
 - Safety, Health & Environment (SHE) Requirements
 - Specification for Contracts (SP-SHE-009-001 SSE);
 - Responsible Procurement Charter (REF-PRS-004);
 - Incident Reporting Management and Investigation Standard (MS-SHE-010); and
 - SHEPD Communication, Reporting of SHE Incidents (REF-PS-SHE-COM-015).

1.3 Offshore CEMP Document Management

1.3.1 The offshore CEMP will be a controlled document and will be formally issued to the *Contractor's* cable installation team. Live copies of the CEMP will be held at the following locations:

- *Contractor's* project office;
- At the premises of any agent of the *Contractor* acting on behalf of the *Contractor*;
- All site offices dealing with marine operations;
- Onboard all principal construction vessels involved in offshore activities;
- With the *Contractor's* Marine Consents Manager.

1.3.2 The *Contractor* will provide the *Employer* with the most up to date copy of the offshore CEMP and is responsible for maintaining the register of document versions and issue dates.

1.4 Linkages with Other Documents

1.4.1 This offshore CEMP document sets out the proposed overarching environmental management framework to be applied during the Project and forms part of a suite of approved documents that were prepared to inform the Marine Licence application and inform the framework for environmental management of the Project.

Document	Document Reference
Project Description	Global Offshore Document Reference (2742-GO-S-SW-0001)
Environmental Supporting Information (ESI) Report	Intertek Document Reference P2291_R4837
Fishing Liaison and Mitigation Action Plan (FLMAP)	SHEPD Document Reference Fishing Liaison Mitigation Action Plan for Pentland East and Hoy (FLMAP)]
Navigational Risk Assessment (NRA): <ul style="list-style-type: none"> ▪ Report Kirkwall 19 February 2019 ▪ Report Thurso 26th March 2019 ▪ Combined Kirkwall and Thurso Navigational Risk Assessment Workshops Summary 	AECOM Document References: <ul style="list-style-type: none"> ▪ 60591722-REP-03 ▪ 60591722-REP-04 ▪ 60591722-REP-05
Operations Inspection Maintenance and Decommissioning (OIMD) Plan	SHEPD Document Reference Operation, Inspection, Maintenance and Decommissioning Strategy (OIMD)
European Protected Species (EPS) Risk and Protected Sites and Species Assessment	Xodus Document Reference A302428-S01-REPT-001
Shore End Construction Environmental Management Plan (CEMP) Murkle Bay – Ground Investigations	ERM Document Reference (Project Number 0476612)
Shore End CEMP for Rackwick Bay	[reference to be inserted]
Marine Licence	[reference to be inserted when received] (see Appendix A)
EPS Licence	Previous Licence - MS EPS 07 2019 1* (see Appendix B)
Basking Shark Licence	Previous Licence - MS BS 01 2019 1* (see Appendix A)

***Note:** New licences covering the period from the 23/03/2020 to 30/09/2021 will be applied for, this section to be updated when new licences are granted.

2. ENVIRONMENTAL MANAGEMENT MEASURES

2.1 Overview

- 2.1.1 The environmental management measures to be implemented for the offshore installation phase of the Pentland Firth East subsea cable replacement (offshore CEMP requirements) are outlined below in Table 2-1. The measures listed have been combined together in a single location to allow the *Contractor* to check and record compliance against the various management measures, mitigation measures and consent conditions (including best practice requirements) as outlined in the supporting FLMAP, NRA, ESI Report Mitigation Summary, Marine Licence (when received), EPS licence and Basking Shark Licence.
- 2.1.2 Measures have been given a specific ID to identify the Project document the measure has originated from as follows:
- ESI – Environmental Supporting Information Report;
 - FLMAP – Fisheries Liaison Mitigation Action Plan;
 - ARCH – Marine Archaeology;
 - NRA – Navigational Risk Assessment; and
 - EPSRA – EPS Risk and Protected Sites and Species Assessment.
 - ML – Marine Licence
 - EPSL – EPS Licence
 - BSL – Basking Shark Licence
- 2.1.3 Prior to the start of installation activities these measures will be reviewed, and as appropriate additional detail will be provided on their implementation.
- 2.1.4 This section should be read in conjunction with the Monitoring and Reporting Plan provided in Section 9 of this offshore CEMP which describes the monitoring (including auditing) and reporting activities that need to be performed during the execution of the Project.

Table 2-1 Environmental Management Measures

Environmental Aspects	Ref	CEMP Requirement	Project Phase (Pre-lay survey, Installation, Post-lay survey)	Responsibility	Date completed/ reviewed or checked [HOLD: to be completed through works]	Relevant Reference/ Evidence [HOLD: to be completed through works]	Comment/ Ongoing actions required [HOLD: to be completed through works]
Seabed, Benthic and Intertidal Ecology							
Seabed, Benthic and Intertidal Ecology	ESI 1	Micro-routing will be used to avoid sensitive species/habitats. Rock bags, grout bags and concrete mattresses deployment will be minimised in areas identified as potential Annex I reef habitat and the footprint of the deposits will be the minimum required to ensure cable safety and stability.	Installation	Contractor Environmental Manager and Offshore Manager			
Marine Mammals							
Marine Mammal Protection Plan	CEMP 1	All works will be undertaken in accordance with the Marine Mammal Protection Plan (see Section 4 of this offshore CEMP).	All phases of works	Contractor Environmental Manager			
Marine mammal monitoring Use of Marine Mammal Observer(s)	EPSRA 1 & 2	There will be MMO coverage for the entire duration of activities. During daylight hours the MMO(s) will observe the sea for the presence of marine mammals and basking sharks and will have the power to delay and / or halt work activities should an individual of these species be sighted within 500m of the activities (100m when avoiding critical delays).	All phases of works	Marine Mammal Observer (By notifying Offshore Manager)			
Cetacean and seal mitigation zone	EPSRA 5	Should any cetaceans or seals be detected within 500 m of the vessel prior to the commencement of geophysical surveys (or after breaks in geophysical survey activity of more than 10 minutes), operations will be delayed until their passage, or the transit of the vessel, results in the cetaceans or seals being more than 500 m away from the vessel	Pre-lay survey Post-lay survey	Marine Mammal Observer (By notifying Offshore Manager)			
Pre-soft-start search	EPSRA 6	Visual and (if required) acoustic monitoring will occur 30 mins prior to commencement of installation activities to determine if any marine mammals or basking sharks are present within 500m of activities (100m in event of critical delay).	Installation	Marine Mammal Observer (By notifying Offshore Manager)			

Environmental Aspects	Ref	CEMP Requirement	Project Phase (Pre-lay survey, Installation, Post-lay survey)	Responsibility	Date completed/ reviewed or checked [HOLD: to be completed through works]	Relevant Reference/ Evidence [HOLD: to be completed through works]	Comment/ Ongoing actions required [HOLD: to be completed through works]
Soft-start	EPSRA 7	For all equipment that has soft start capability: Power will be built up slowly over at least 20 minutes to give any cetaceans, seals or basking sharks adequate time to leave the area. Build-up of power will occur in uniform stages to provide a constant 'ramp-up' in amplitude.	All phases of works	Offshore Manager			
Passive Acoustic Monitoring (PAM)	EPSRA 8	PAM will be utilised by a qualified MMO/PAM operator in times of poor visibility (e.g. fog).	Pre-lay survey Post-lay survey	Marine Mammal Observer / PAM operator			
Standardised reporting	EPSRA 10	All recordings of cetaceans, seals and basking sharks will be made using JNCC Standard Forms. A monitoring report detailing the features of interest recorded, methods used to detect them, and details of any problems encountered will be submitted to Marine Scotland and SNH at the end of operations.	All phases of works	Marine Mammal Observer			
Basking shark							
Basking shark mitigation zone	EPSRA 4	During survey works, the MMO will monitor for the presence of basking sharks, in addition to marine mammals, and will delay start of the works if any are seen within 500 m of the installation vessel.	Pre-lay survey Post-lay survey	Marine Mammal Observer (By notifying Offshore Manager)			
Slow moving installation vessel	EPSRA 11	The installation vessel will be moving at a maximum speed of 4 knots to allow any basking sharks time to move away from the vessel. Should a basking shark be found to be in the direct way of the vessel, the vessel will slow down further or, if possible, alter course to avoid collision.	Installation	Marine Mammal Observer (By notifying Offshore Manager)			
Toolbox talks	EPSRA 12	Installation vessel crew will be made aware of all protected species within the marine environment through the following guidance; the Marine Conservation Society (MCS) Basking Shark Code of Conduct and good practice measures for boat control near basking sharks and the Scottish Marine Wildlife Watching Code and Guide to Best Practice for Watching Marine Wildlife.	All phases of works	Marine Mammal Observer			

Environmental Aspects	Ref	CEMP Requirement	Project Phase (Pre-lay survey, Installation, Post-lay survey)	Responsibility	Date completed/ reviewed or checked [HOLD: to be completed through works]	Relevant Reference/ Evidence [HOLD: to be completed through works]	Comment/ Ongoing actions required [HOLD: to be completed through works]
Otter							
Otter survey	EPSRA 14	A pre-installation survey at the cable landfalls will be conducted at least two months prior to works commencing. This survey will be followed up with a walkover survey immediately prior to works commencing. An ECoW will be responsible for the otter survey and for advising appropriate mitigation measures, which will be detailed in the relevant onshore CEMPS and SSEN Otter SPP, as required.	Pre-lay survey	Contractor Environmental Manager (to liaise with the Onshore ECoW)			
Otter monitoring	EPSRA 15	There will be MMO coverage for the duration of the marine activities, with adequately trained and experienced MMO(s) working standard 12-hour shifts.	All phases of works	Marine Mammal Observer			
Seabirds							
Rafting seabirds	EPSRA 16	The installation vessels will be moving at a maximum speed of 4 knots to allow any rafting seabirds time to move away from the vessel should they be disturbed by the vessel presence.	All phases of works	Contractor Environmental Manager			
Light disturbance	EPSRA 19	When within a SPA and where there is potential for 24-hour working, lighting on-board the cable installation vessel(s) will be kept to the minimum level required to ensure safe operations and lights will be directed or shielded to prevent upward illumination and minimise disturbance.	All phases of works	Contractor Environmental Manager			
Other Marine Users							
Stakeholder engagement	FLMAP 1	Continuing effective positive liaison with all interested parties through the pre-construction, construction and operational phases of the cable replacement.	All phases of works	CFLO			
Communication with sea users	FLMAP 2	Informing sea users of construction areas and planned activities through the Notice to Mariners (NTMs), Weekly Notice of Operations (WNO) and update emails from the developer and their subcontractors.	All phases of works	CFLO			

Environmental Aspects	Ref	CEMP Requirement	Project Phase (Pre-lay survey, Installation, Post-lay survey)	Responsibility	Date completed/ reviewed or checked [HOLD: to be completed through works]	Relevant Reference/ Evidence [HOLD: to be completed through works]	Comment/ Ongoing actions required [HOLD: to be completed through works]
Construction Phase Plan (CPP)	FLMAP 3	Construction Phase Plan (CPP) - Provision of details of the schedule for cable lay activities to local ports, ship operators, fishermen and recreational sailing organisations.	Installation	CFLO			
AIS Tracking	FLMAP 4	The vessel has AIS as a legal requirement.	Installation	Master			
Safety zone	FLMAP 5	Implementation of safety zones (500m) around the cable lay vessel will reduce the risk of collision between the cable laying vessel and other vessels transiting the area.	Installation	Master			
Fishing Industry Representatives (FIR) and Standard operating procedures (SOP)	FLMAP 6	Should a FIR not be present on a vessel, the Fishing Gear Interaction Standard Operating Procedure (SOP) will be followed as provided in Appendix A of the FLMAP.	Installation	CFLO/FIR			
Vessel collision reduction	NRA 1	A guard vessel will be used for areas of exposed cable where a risk to the asset or a danger to navigation has been identified.	Installation	Project Manager			
Timing and schedule	NRA 2	Liaise with fishing stakeholders to organise construction schedules as far as practicably possible in order to reduce the loss of fishing area associated with safety zones during the installation phase of the submarine cable replacement.	All phases of works	CFLO			
Marine Archaeology							
Marine Archaeology Management Plan	CEMP 2	All works will be undertaken in accordance with Marine Archaeology Management Plan (see Section 5 of this offshore CEMP).	All phases of works	Contractor Environmental Manager (Communicating with Offshore Manager)			

Environmental Aspects	Ref	CEMP Requirement	Project Phase (Pre-lay survey, Installation, Post-lay survey)	Responsibility	Date completed/ reviewed or checked [HOLD: to be completed through works]	Relevant Reference/ Evidence [HOLD: to be completed through works]	Comment/ Ongoing actions required [HOLD: to be completed through works]
Mitigation during installation	ARCH 2	In order to manage the potential for impacting unknown heritage, the Crown Estate's PAD reporting protocol (2014) produced by Wessex Archaeology will be implemented. The use of vessels with DP positioning systems rather than anchors will further prevent accidental impact.	All phases of works	Contractor Environmental Manager (Communicating with Offshore Manager)			
Invasive Non-Native Marine Species							
Invasive Non-Native Marine Species (INNMS) Plan	CEMP 3	All works will be undertaken in accordance with the INNMS Plan. See Section 6 of this offshore CEMP.	All phases of works	Offshore Manager			
Waste management							
Waste management	CEMP 4	All works will be undertaken in accordance with the Waste Management Plan. See Section 7 of this offshore CEMP.	All phases of works	Offshore Manager			
Pollution Prevention, Spill Response and Contingency Planning							
Pollution Prevention, Spill Response and Contingency Planning	CEMP 5	All works will be undertaken in accordance with the Pollution Prevention, Spill Response and Contingency Plan. See Section 8 of this offshore CEMP.	All phases of works	Project Manager			
Environmental Monitoring and Reporting							

Environmental Aspects	Ref	CEMP Requirement	Project Phase (Pre-lay survey, Installation, Post-lay survey)	Responsibility	Date completed/ reviewed or checked [HOLD: to be completed through works]	Relevant Reference/ Evidence [HOLD: to be completed through works]	Comment/ Ongoing actions required [HOLD: to be completed through works]
Monitoring and Reporting Plan		To ensure works are carried out as per legislation, consent and licence conditions and in line with the Employer requirements monitoring and reporting of activities is to be undertaken in accordance with Monitoring and Reporting Plan, including completion of the Vessel Audit – Environmental Compliance Checklist (see Section 9 of this offshore CEMP).	All phases of works	Project Manager			
Marine Licence Conditions							
Marine Licence (Insert) reference number when received)	ML #	[Marine Licence Conditions to be listed below when marine licence is received.]					
	ML #						
European Protected Species (EPS) Licence and Basking Shark Licence Conditions							
EPS Licence Reference*	EPSL 1 BSL 1	The licensee must ensure that all licensed activities are carried out in strict accordance with the mitigation and working methods proposed in the application for this licence to disturb European protected species, together with supporting information. All works must be written carried out within the timescale give within the application and any subsequent written correspondence between the Scottish Ministers and the licensee but subject to the following modification for amendments made within this licence.	All phases of works	Contractor Environmental Manager			
Basking Shark Licence*							
	EPSL 2 BSL 2	The Licensee must ensure that all works are carried out in strict accordance with the EPS Risk and Protected Sites and Species Assessment for Distribution Cable Surveys dated 02 August 2019 (Document: A-302428-S01-REPT-001).	All phases of works	Contractor Environmental Manager			
	EPSL 3 BSL 3	In the event of the licensee becoming aware that any of the information on which issue of this licence was based has changed, the Scottish Ministers must be notified as soon as reasonably practicable.	All phases of works	Contractor Environmental Manager			

Environmental Aspects	Ref	CEMP Requirement	Project Phase (Pre-lay survey, Installation, Post-lay survey)	Responsibility	Date completed/ reviewed or checked [HOLD: to be completed through works]	Relevant Reference/ Evidence [HOLD: to be completed through works]	Comment/ Ongoing actions required [HOLD: to be completed through works]
	EPSL 4 BSL 4	The licensee must ensure that the Joint Nature Conservation ("JNCC") guidelines for minimising the risk of injury to marine mammals from geophysical surveys dated August 2017 ("JNCC Guidance") is followed at all times in connection with the undertaking of such surveys as far as it is practical to do so. These are available from the JNCC website http://jncc.defra.gov.uk/pdf/jncc_guidelines_seismicsurvey_aug2017.pdf	All phases of works	Contractor Environmental Manager			
	EPSL 5 BSL 5	The licensee must ensure that, if any aspects of the licensed activities differ from the detail submitted in the online Marine Noise Registry, a new Proposed Activity Form is completed and submitted no later than one week prior to commencement of the licensed activities.	All phases of works	Contractor Environmental Manager			
	EPSL 6 BSL 6	The licensee must ensure that where survey equipment has the capability to undergo soft start procedure, this is implemented on every occasion survey equipment is switched on.	All phases of works	Contractor Environmental Manager			
	EPSL 7 BSL 7	Except where it is not relevant to the provisions of this licence, the licensee must ensure that the Scottish Marine Wildlife Watching code and Marine Conservation Society (MCS) Code of Conduct are adhered to at all times.	All phases of works	Contractor Environmental Manager			
	EPSL 8 BSL 8	The licensee must ensure that copies of the licence are available for inspection by any person authorised by the Scottish Ministers at the office of the licensee and at all sites where license activities are taking place.	All phases of works	Contractor Environmental Manager			
	EPSL 9 BSL 9	Any person authorised by the Scottish Ministers must be permitted to inspect the operations relating to the licence at any reasonable time. The licensee must allow appropriate assistance to facilitate inspection.	All phases of works	Contractor Environmental Manager			
	EPSL 10 BSL 10	The licensee must, no later than one month after the expiry date of this licence, submit to the Scottish Ministers a written report detailing all actions taken in accordance with the specified terms and conditions of this licence. This report must detail the procedures, visual observations	All phases of works	Contractor Environmental Manager			

Environmental Aspects	Ref	CEMP Requirement	Project Phase (Pre-lay survey, Installation, Post-lay survey)	Responsibility	Date completed/ reviewed or checked [HOLD: to be completed through works]	Relevant Reference/ Evidence [HOLD: to be completed through works]	Comment/ Ongoing actions required [HOLD: to be completed through works]
		and include the original Marine Mammal Reporting Form(s). Any difficulties encountered or recommendations should also be noted.					
	EPSL 11 BSL 11	The licensee must, no later than 12 weeks after completion of the noisy activity, complete and submit a Close-out Report in the online Marine Noise Registry.	All phases of works	Contractor Environmental Manager			

* Listed licence conditions refer to the previous EPS and BS licences held by the project (MS EPS 07 2019 1 and MS BS 01 2019 1) but will be similar to those issued with the new licences currently being applied for.

3. ENVIRONMENTAL MANAGEMENT FRAMEWORK

3.1 Introduction

3.1.1 This section sets out the environmental management framework for the Project, under the following areas:

- Offshore CEMP – roles and responsibilities;
- Offshore CEMP – staff competency and training; and
- Offshore CEMP – communications and reporting.

3.2 Offshore CEMP Roles and Responsibilities and Chain of Command

3.2.1 This section sets out the roles and responsibilities of all relevant Project personnel in relation to the delivery of this offshore CEMP.

3.2.2 All Project personnel have a responsibility to comply with the requirements of the offshore CEMP, however the key roles relevant to the delivery and implementation of the offshore CEMP are outlined in Table 3-1 below.

Table 3-1 Roles and responsibilities

Role	Responsibilities	Name and Contact Details
Project Manager (<i>Contractor</i>)	<p>Responsible for ensuring that the project is in compliance with any Consent, licence or associated information and identifying any breach or potential breach to the Employer Marine Consents Manager. Specific responsibilities, include:</p> <ul style="list-style-type: none"> Facilitate dissemination of environmental requirements to the Project Team; Ensure and be responsible for compliance with all permits, licences and consents, and to report any deviations or breaches; Oversee the implementation and review of environmental procedures throughout the Project; Monitor the environmental performance of the Project through maintaining an overview of incidents, inspections and audits; Ensure that environmental considerations form an integral part of Design and Implementation of the Works and include environmental reviews as part of regular Project meetings; Review environmental matters with the Contractor Environmental Manager on a regular basis and as per project requirements; Liaise with the Contractor Environmental Manager on all environmental issues as appropriate; Ensure that all environmental incidents are reported to the Contractor Environmental Manager according to agreed procedures; and Nominate individual Project Team members to support the Employer in public relations and community liaison activities, including local community meetings. 	
Project Manager (<i>Employer</i>)	<p>Amongst others is responsible for ensuring that the project is in compliance with any Consent, licence or associated information and identifying and breach or potential breach to the Marine Consents Manager.</p>	
Offshore Manager (<i>Contractor</i>)	<p>The Offshore Manager will be responsible for overseeing the monitoring of environmental and licence compliance during works. The Contractor Site Manager is experienced in ensuring site operations function in a manner that is environmentally compliant. Specific, responsibilities include:</p> <ul style="list-style-type: none"> Understanding and implementing all environmental procedures ensuring that site operations function in compliance; Reporting environmental incidents at the earliest possible time and advising the Contractor Environmental Manager & Project Manager; 	

Role	Responsibilities	Name and Contact Details
	<ul style="list-style-type: none"> Ensuring toolbox talks are carried out as necessary to highlight responsibilities of the project under the offshore CEMP. 	
RQHSE Business Partner (<i>Contractor</i>)	<p>The RQHSE Business Partner shall ensure that:</p> <ul style="list-style-type: none"> Incidents are thoroughly investigated and reported throughout the Company; Assistance is provided, when appropriate, during investigations; Investigation levels are appropriate to the actual or potential severity of the incident; and Incidents are reported in compliance with statutory requirements. 	
Group SHE Manager	<p>The Group SHE Manager shall ensure that:</p> <ul style="list-style-type: none"> Incidents are thoroughly investigated and reported throughout the Company; Assistance is provided, when appropriate, during investigations; Investigation levels are appropriate to the actual or potential severity of the incident; and Incidents are reported in compliance with statutory requirements. 	
Supervisor for Offshore Works (<i>Employer</i>)	<p>The Employer Supervisor for Offshore Works shall be responsible for ensuring that the Employers requirement under the contract with the Contractor are met. They shall be responsible for identifying and raising any defects or breaches against the contract, licences or supporting information. These defects and breaches shall be detailed in the Daily Project Report (DPR).</p>	
Marine Consents Manager (<i>Employer</i>)	<p>The Employer Marine Consents Manager shall be responsible for:</p> <ul style="list-style-type: none"> Obtaining, Marine Licences, Marine Works Licences and Marine EPS Licences (as appropriate) for the works; Review and acceptance of Contractor documentation; Conducting vessel inspections and pre works briefings where they relate to licence conditions or Consent compliance and Working alongside with the external stakeholder engagement team in developing relationships, including Marine Scotland and The Crown Estate Scotland, to ensure that the project information is communicated as and when appropriate, in order to build consensus around project decision making. <p>They shall be in direct communication with the Employer Project Manager and Employer Supervisor for Offshore Works.</p>	
Company Fisheries Liaison Officer (CFLO)	<p>The primary responsibilities of the CFLO are to establish and maintain effective communications between Employer, the Contractor and legitimate sea users during surveys and construction and ensure compliance with best practice guidelines whilst doing so. The primary responsibilities of the CFLO are described in detail in the FLMAP.</p>	

Role	Responsibilities	Name and Contact Details
Fisheries Industry Representative (FIR)	The FIR reports to the CFLO and works in conjunction with Employer. The primary responsibilities of the FIR are also described in the FLMAP.	
Marine Mammal Observer (MMO) and PAM operator	The Marine Mammal Observer (MMO) and Passive Acoustic Monitor (PAM) operator shall be trained or experienced in UK waters and shall implement the requirements set out in any applicable EPS Licence, Marine Mammal Protection Plan (MMPP) or EPS Risk Assessment, along with compliance with any other applicable legislation or guidance such as the JNCC guidance. They shall be employed by the Contractor and shall be dedicated to the role on a full-time basis. A minimum of two MMO/PAM operators will be provided for 24-hour works. MMOs/PAM Operators will only be present onboard the main large DP2 construction vessels.	
Environmental Manager (<i>Contractor</i>)	The Contractor Environmental Manager will be based at the Contractors head office and be in close contact with the Project Manager. The Contractor Environmental Manager shall be responsible for: <ul style="list-style-type: none"> ▪ Preparation, implementation and undertaking reviews of environmental plans in accordance with Employer and Contractor requirements and procedures and current legislation; ▪ Providing the necessary updates and reports to Project Team and Employer; ▪ Interfacing with site staff and subcontracted companies on environmental issues; ▪ Ensuring the Project specific offshore CEMP is implemented, ensuring compliance with procedures and legislation; ▪ In conjunction with the Employer, liaising with government departments, local authorities and other statutory authorities on environmental matters, as per project needs; and ▪ Reviewing Method Statements against environmental issues. 	
Other project staff	All other project staff, are responsible for ensuring that they adhere to the following: <ul style="list-style-type: none"> ▪ Understand and implement procedures relevant to their role as laid out in the offshore CEMP and the associated documentation including FLMAP and MMMP; ▪ Raise any environmental concerns with their supervisor or the Contractor Environmental Manager; and ▪ Report all environmental incidents to their supervisor or the RQHSE Business Partner as soon as possible. ▪ Compliance with offshore CEMP. 	

3.3 Contractor Staff Competence, Training and Awareness

- 3.3.1 *Contractor* will require that all personnel engaged in the Project have adequate experience to perform the activities executed under their responsibility or in their scope in a safe manner for themselves and others and are adequately supported at all levels. This will be confirmed by the Contractor Environmental Manager.
- 3.3.2 *Contractor* will ensure that a Project organogram is in place and that the roles and responsibilities of all named personnel are clear and that clear project management procedures are in place for all aspects of the Project, including those related to environmental management measures.
- 3.3.3 *Contractor* has a documented process in place to manage the selection and ongoing performance of any subcontractors to ensure that the SHE risks associated with the *Contractors'* activities are managed effectively.
- 3.3.4 *Contractor* will require that any subcontractors have appropriate environmental management procedures in place.
- 3.3.5 *Contractor* (or their appointed representative) will undertake audit and inspection of *Contractor's* work to check compliance with SHE requirements.
- 3.3.6 *Contractor* will require that all Project personnel attend required inductions including, but not necessarily limited to, matters related to Employer's environmental rules and policies, Site Rules, Health and Safety requirements, arrangements for First Aid and Emergency Response (including environmental pollution and emergency spills), Environmental Management, including Consent compliance requirements and Incident Management.
- 3.3.7 Training and awareness specific to this offshore CEMP will be delivered using the following tools:
- Vessel inductions;
 - Toolbox talks; and
 - Vessel notice boards / awareness materials.

Project inductions

- 3.3.8 Project inductions shall cover the offshore CEMP, highlighting the key environmental sensitivities and considerations. This is to ensure that every Project Team member is aware of their duty and the work-related specific hazards. Vessel Inductions are utilised to raise awareness for personnel regarding site/vessel rules, emergency response procedures and environmental protection arrangements.

Toolbox talks

- 3.3.9 A toolbox talk will be held for the all vessel crew as part of the daily briefing to be held before starting the operation. In addition, a toolbox talk will be held for any significant abnormal task or change in operation. These meetings are to address the exact nature of the task and HSE issues specific to the task being performed during a new working day/shift or task change. A list of attendees will be recorded at each toolbox talk meeting. Toolbox talks are a combination of briefing followed by a consultation with the workforce to check understanding and invite opinion.

Vessel notice boards/awareness materials

- 3.3.10 In addition to induction and talks, the Contractor Environmental Manager will be responsible for managing the preparation of a series of awareness materials, which may include training packs, posters, signs and newsletters. For example, posters on specific procedures can be on display on notice boards on the cable installation vessel.

3.4 Offshore CEMP Communications and Reporting

Internal communications

- 3.4.1 The following summarises the lines of communication between the key roles in relation to the implementation of the CEMP:
- The Contractor Environmental Manager plays a key role in the delivery of the offshore CEMP, alongside the Contractor Offshore Manager and the *Employer* Marine Consents Manager and the *Employer* Supervisor for Offshore Works. In fulfilling this role, the *Employer* Marine Consents Manager and *Employer* Supervisor for Offshore Works can establish direct contact with the *Employer* Project Manager;
 - The *Employer* Marine Consents Manager will report directly to MS-LOT on compliance with the offshore CEMP and will liaise with MS-LOT and other stakeholders on environmental matters; and
 - The *Employer* Marine Consents Manager and *Employer* Supervisor for Offshore Works will maintain direct contact with and report on the offshore CEMP compliance and environmental management issues to the *Employer* Project Manager.

- 3.4.2 During the works, daily (or as required) meetings / calls will take place involving the Employer Project Manager, the Contractor representatives, the Employer Marine Consents Manager and the Employer Supervisor for Offshore Works. Consents and licence compliance and environmental management will be discussed as necessary. Any issues or points to note will be recorded in the Daily Project Report (DPR).
- 3.4.3 The *Contractor* will be required to provide regular written reports to the *Employer* on installation activity. *Contractor* reporting will include information on environmental management such as details of environmental incidents (if any), environmental statistics and records of environmental inspections / audits undertaken and any such other information as may be required for the Contractor Environmental Manager to complete their reporting responsibilities. This information will inform the external reporting to MS-LOT (see below).
- 3.4.4 All Project personnel will be required to report any environmental concerns or issues to the Contractor Environmental Manager and/or Contractor Offshore Manager and the Employer Supervisor for Offshore Works immediately.

External communications

- 3.4.5 Table 3-2 summarises the offshore CEMP external reporting requirements, mechanisms and frequencies.

The relevant returns and notifications as required by the Marine Licence (and set out in Table 3-2) will be collated from information supplied by the *Contractor* and the *Employer* Project Team where necessary.

Table 3-2 Required returns and notifications

Communication Type	Responsible Party	Proposed Frequency	Relevant Stakeholders
Pre-installation reporting requirements			
Proposed date of commencement of installation	<i>Employer</i> Marine Consents Manager	No later than 4 weeks prior to commencement of cable installation	MS-LOT
Details of the proposed nature and timescale of the cable installation works	CFLO via Notice to Mariners (NTM)	No later than 10 days prior to commencement of cable installation	All appropriate maritime users; Kingfisher Fortnightly Bulletin; Fishermen, their representatives and other relevant marine stakeholders
Registration of any noisy activities in the JNCC Marine Noise Register	Contractor Environmental Manager	Prior to submission of the Marine Licence and EPS Licence applications.	JNCC
During installation			
Details of the proposed nature and timescale of the cable installation works	CFLO via NTM	During cable installation (as / if required)	Fishermen, their representatives and other relevant marine stakeholders
Change to any of the information on which the	'The <i>Employer</i> Marine Consents Manager	As soon as reasonably practical	MS-LOT

Communication Type	Responsible Party	Proposed Frequency	Relevant Stakeholders
Marine Licence is based			
Details of any part of the licenced works that has become a danger to navigation or protection of legitimate users of the sea	<i>Contractor</i> Marine Consents Manager	As soon as reasonably practical	Maritime and Coastguard Agency (MCA), Northern Lighthouse Board (NLB) and Kingfisher Information Service Offshore Renewables and Cable Awareness (KIS-ORCA)
Environmental or pollution incidents	Responsible parties remain as The <i>Contractor</i> Marine Consents Manager and <i>Contractor</i> Supervisor for Offshore Works	Should one occur within 24 hrs for minor incidents within 30 mins for major incidents	MS-LOT, MCA
Archaeological discovery	<i>Employer</i> Marine Consents Manager	Following an archaeological discovery	Historic Environment Scotland (HES) and MS-LOT
Post-installation reporting requirements			
Notification of completion of operations	<i>Employer</i> Marine Consents Manager	Within one week of completion of cable installation	MS-LOT
Nature and quantity of all substances and articles deposited below Mean High Water Springs (MHWS)	<i>Employer</i> Marine Consents Manager	Within four weeks of completion of cable installation	MS-LOT
Copy of Marine Licence and 'As Laid Plan'	<i>Employer</i> Marine Consents Manager	Following completion of cable installation	The Hydrographic Office And notify MS-LOT of the notification at the time it is made
Cable route and a 500 m zone either side of it as a hazardous area for anchoring	<i>Employer</i> Marine Consents Manager	Following completion of cable installation	Maritime and Coastguard Agency (MCA), UK Hydrographic Office (UKHO), Northern Lighthouse Board (NLB), the Kingfisher Information Service Offshore Renewables and Cable Awareness (KIS-ORCA) and the UK International Cable Protection Committees

Communication Type	Responsible Party	Proposed Frequency	Relevant Stakeholders
			And notify MS-LOT of the notification at the time it is made
Assessment of any risks posed by final subsea cable route, burial depths and un-trenched areas where protection measures were used (to ensure that the safety of navigation and other legitimate users of the sea is not compromised)	Contractor Environmental Manager	Within eight weeks of completion of cable installation	MS-LOT
Marine mammal sightings	<i>Contractor</i> to prepare MMO reports for issue to MS-LOT by the licence holder	Within 4 weeks of completion	MS-LOT, JNCC and SNH

4. MARINE MAMMAL PROTECTION PLAN

4.1 Overview

- 4.1.1 The Contractor will ensure legal compliance and implement measures in line with the relevant regulatory and policy framework regarding marine mammals.
- 4.1.2 To reduce the collision risk and disturbance to marine mammals a Marine Mammal Protection Plan (MMPP) has been prepared (see Section 4.2 below). The mitigation measures in the MMPP are informed through a separate European Protected Species (EPS) Risk and Protected Sites and Species Assessment undertaken for the Project (Xodus Document Reference A302428-S01-REPT-001).
- 4.1.3 There are no recorded seal haul-out sites nearby the cable landfalls at Murkle Bay or Rackwick Bay, with the closest designated haul-out sites being Selwick, found 11.1km north of Rackwick Bay around the Hoy coastline, and Gills Bay which is found approximately 19km to the east of the installation corridor.

4.2 Marine Mammal Protection Plan (MMPP)

- 4.2.1 The following measures have been identified to reduce collision risk and disturbance to marine mammals (cetaceans and seals) present in the area of the Project through the preparation of a Marine Mammal Protection Plan (MMPP). The potential for disturbance to marine mammals arises from the noise generated by the proposed cable replacement activities.
- 4.2.2 The MMPP measures as identified by the EPS Risk Assessment are:
 - Deployment of qualified and trained MMO(s)/PAM operator(s) on a vessel for the duration of the works to monitor for the presence of marine mammals (cetaceans and seals) prior to the commencement of, and during, the works:
 - There will be MMO coverage for the duration of the cable decommissioning activities, with trained and experienced MMO(s) working standard 12-hour shifts. They will have experience of working at sea and will be trained and experience in the operation of PAM (acoustic) equipment;
 - During daylight hours the MMOs will carry out visual observations to monitor for the presence of marine mammals prior to commencing activities and will recommend delays in the commencement of activities should any marine mammals be detected within the mitigation zone (see below); and
 - When visibility is poor (i.e. due to fog or during hours of darkness) the PAM system will be operated by a single MMO/PAM operator prior to any cable marine operations commencing.
 - Mitigation zone – works only to commence once all marine mammals are clear of the mitigation zone. The following mitigation zones, relating to animals present in the water, will be implemented for the Project:
 - 500m for cetaceans;
 - 100m for seals; and
 - Should any cetacean/seal be detected within the relevant zones listed above, activities will be delayed until their passage (or the transit of the vessel) results in the marine mammals no longer present in the mitigation zone. In both cases, there will be a 20-

minute delay from the time of the last sighting within the mitigation zone to the commencement/recommencement of the activities.

- Reporting:
 - All marine mammal sightings, including seal sightings, will be documented by the MMO according to JNCC guidelines.
- The *Contractor* will provide all Project personnel with marine mammal awareness and good practice training;
- Posters and signs identifying risks and good practice will be provided;
- Pictures of species of concern will be provided; and
- The MMO will have the authority to postpone or stop works in conditions of low visibility where marine mammal collision risk is high, and the full extent of the safety zone cannot be observed.

5. MARINE ARCHAEOLOGY MANAGEMENT PLAN

5.1 Overview

- 5.1.1 The *Contractor* is required to protect archaeological assets in the Project area. More detail on the regulatory and policy framework regarding archaeology can be found in Section 8 of the Environmental Supporting Information Report (Intertek Document Reference P2291_R4837).

The Pentland Firth has throughout history been an important maritime route between the Atlantic Ocean and the North Sea. As such there exists the potential for undiscovered wrecks to be present within the Pentland Firth, and by extension the installation corridor. Due to the Royal Navy's use of Scapa Flow as a base in both WW1 and WW2 and subsequent incursions from German vessels and U-boats, sunken vessels from this era have the greatest potential to be preserved in the Pentland Firth. Potential impacts on unknown heritage will be managed through the implementation of an archaeology and cultural heritage plan management plan (below). The measures to avoid / minimise the impacts on the onshore features of archaeological importance are provided in the onshore CEMP (ERM, 2019).

5.2 Archaeology and cultural heritage plan management plan

5.2.1 Mitigation by design:

- The potential for significant impacts on marine cultural heritage has been reduced to negligible-low during the development and design of the Project by conducting a desk-based assessment, geophysical and Drop Down Video (DDV) surveys to identify any marine historic environment assets;
- A pre installation survey will be conducted to inform final cable routing and vessel anchoring areas which will seek to avoid any anthropogenic seabed features; and
- Rock filter bags, grout bags and/or concrete mattresses will be used to hold the cable in position. This will significantly reduce any cable movement and potential scour or disturbance of unknown archaeological remains over the lifetime of the Project.

5.2.2 Mitigation during installation:

- The *Contractors* Offshore Manager will be the initial point of contact regarding archaeological interests; and
- Potential impacts on unknown heritage will be managed through implementation of a reporting protocol for the discovery of previously unknown marine cultural material during development e.g. the reporting protocol produced by Wessex Archaeology (2014) for the Crown Estate (<http://www.wessexarch.co.uk/protocolsarchaeological-discoveries-pad>).

5.2.3 Mitigation during operation:

- The reporting protocol will be kept in place in case anything of interest is observed during cable installation activities. If any cultural heritage sites are reported during cable installation activities, it is recommended that they are investigated by a qualified marine archaeologist to determine their cultural heritage importance.

6. INVASIVE NON-NATIVE MARINE SPECIES PLAN

6.1 Overview

- 6.1.1 It is common practice for offshore construction projects around the UK to manage the risk of introduction of non-native marine species. As such all vessels involved in cable installation activities will be required to meet relevant legislative requirements and best standard practices with regards to ballasting activities and vessel biofouling management

6.2 Regulatory requirements

- 6.2.1 To prevent the risk of spread of non-native species through discharging of ballast water, all works will be carried out in accordance with The International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM).
- 6.2.2 The International Maritime Organisation (IMO) also aims to control and manage ships' biofouling through the implementation of the Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (Biofouling Guidelines IMO 2011) (resolution MEPC. 207 (62)). The Biofouling Guidelines state that a ship should implement biofouling management practices, including the use of anti-fouling systems and other operational management practices to reduce the development of biofouling. The intent of such practices is to keep the ship's submerged surfaces, and internal seawater cooling systems as free of biofouling as practical.
- 6.2.3 In addition, in 2014 SNH commissioned the production of guidance for producing site and operation-based plans for preventing the introduction of non-native species (Payne *et al.*, 2014). The mitigation and management measures to be adopted to prevent the introduction of invasive non-native species are set out below:

6.3 Invasive Non-Native Marine Species Management Plan

- 6.3.1 In adopting management measures to prevent the introduction of INNMS, The *Contractor* will:
- Ballast water management:
 - Ensure all vessels contracted to undertake works will be contractually obliged to adhere to relevant BWM measures as outlined above, where relevant and be surveyed and issued with an International Ballast Water Management Certificate.
 - Ballast Water Management Plans (BWMP) will be provided by contracted vessels in accordance with Regulation B-1 of the Convention, alongside Ballast Water Record Books as described by BWM Regulation B-2.
 - Biofouling / Antifouling:
 - The *Contractor* will ensure that all vessels consider the requirements of Resolution MEPC.207(62) Guidelines for the Control and Management of Ships Biofouling to
 - Minimise the Transfer of Invasive Aquatic Species, including for example the implementation of a biofouling management plan, and records of biofouling management practices kept in a biofouling record book.

- Ensure all vessels (as appropriate) have an International Anti-fouling System Certificate.
- All vessels will be required to undertake pre use and post use checks, including the presence for marine growth. All equipment (ploughs, ROVs etc.) will be required to be free from marine growth prior to mobilisation.

7. WASTE MANAGEMENT PLAN

7.1 Overview

- 7.1.1 The principal wastes generated from the works will include packaging, general waste and wastewater. Hazardous wastes are possible in the form of used oils and chemicals. Under the Duty of Care as a waste producer, the failure to manage wastes generated from the Project, such as failure to segregate recyclates, also results in breaches of waste management legislation in addition to potential environmental impact.
- 7.1.2 In accordance with MARPOL (73/78) Annex V (as amended) every ship (certified to carry 15 persons or more), and vessel (of 400 gross tonnage and above) involved in the Project will have a Waste Management Plan. The purpose of the vessel Waste Management Plan is to provide guidance to the Master and crew on board the ship on the procedures for collecting, storing, processing and disposing of waste, including the use of the equipment on board. Vessel Waste Management Plans will detail the specific ship's equipment and arrangements, and the location of equipment operating manuals.

7.2 Waste management plan

7.2.1 General

- The only materials to be deposited to the seabed will be those detailed in the Marine Licence.
- All vessels engaged in the works will be equipped with waste storage facilities according to IMO International Convention for the Prevention of Pollution from Ships (MARPOL) standard vessels certified to carry 15 persons or more or of 400 GRT and above will have the following in place:
 - Waste management plan; and
 - Waste record book.
 - No waste will be disposed of over the side of the vessel and all produced waste will be stored on board.
 - All waste products and rubbish will be removed from the vessel and disposed of by a registered waste disposal company.
 - Any debris or waste materials arising during the works will be removed from the vessel and disposed of by a registered waste disposal company.

7.2.2 Waste Reduction

The waste hierarchy of Prevention, Re-use, Recycle and Disposal will be adopted on the Project. The following measures will align the Project waste management with the hierarchy and reduce the amount of waste produced during construction:

- The appropriate volume of materials will be ordered;
- Excess materials will be returned to the supplier if possible;
- Re-usable materials will be identified on site and removed for storage and re-sale;
- Recyclable materials will be removed from site for processing in licenced facilities;
- There will be clearly located and defined storage areas for materials; and

- General information on waste will be provided in site inductions and toolbox talks with feedback welcomed.

7.2.3 Storage Of Waste

- The following methods have been identified in relation to storage of waste:
- Storage will be provided at suitable points for all waste streams including hazardous waste, liquid wastes and discarded smoking materials;
- Waste will be segregated as far as practically possible;
- Waste will be stored in secure covered containers which will be clearly labelled with the waste they hold e.g. wood, metal, plastics etc.;
- Liquid wastes will be stored in appropriately (portable or permanent) bunded facilities that hold the capacity of the container;
- Any hazardous waste will be stored in separate containers (further details on hazardous waste are provided below);
- Any odorous wastes will be temporarily stored in suitable containers and where possible, at a distance from any nearby sensitive receptors;
- All places of work will be kept clean and tidy. Waste will not be allowed to accumulate. All surplus material and waste are to be removed in a timely manner;
- Storage areas / containers will be monitored, and action taken if waste is piled too high; and
- Burning of waste is prohibited.

7.2.4 Hazardous (Special) Waste

“Hazardous waste” –any waste which contains properties that might make it harmful to human health or the environment. In Scotland, hazardous waste is referred to as Special waste.

Special waste could arise from the following sources:

- Maintenance of plant and machinery;
- Oily water waste;
- Oil filters;
- Oily rags;
- Oil absorbent pads etc.;
- Contaminated Marine Gas Oil (MGO);
- Hydraulic oil; and
- Environmental spill recovery (small amounts only; larger volumes taken away directly for disposal).

All special waste will be segregated by type and from other waste streams.

All special waste oil will be stored in a bunded facility until such times that it is collected.

Used filters, rags and absorbents will be stowed in the special waste container in drums or waste oil bags.

7.2.5 Transporting Waste

There is a duty of care on the waste producer to make sure that waste is appropriately disposed of. The following measures have been identified to comply with the duty of care:

- All waste leaving the Project will be accompanied by a Waste Transfer Note (WTN) for non-hazardous waste or a Special Waste Consignment Note (SWCN) for hazardous waste. A copy of which will be retained for 2 (WTN) or 3 years (SWCN); and
- Waste contractors will be checked ahead of the works to ensure they have valid licences.

8. POLLUTION PREVENTION, SPILL RESPONSE AND CONTINGENCY PLAN

8.1 Overview

- 8.1.1 The *Contractor* will be responsible for ensuring all measures set out in the six technical Annexes of the International Convention for the Prevention of Pollution from Ships (MARPOL) are adhered to and appropriate management plans relating to each of the items above are produced and adhered to throughout the works.
- 8.1.1.1 There are legislative requirements (Section 9.3) that stipulate specific requirements with regards to every ship (certified to carry 15 persons or more), and vessel (of 400 GRT and above). Not all vessels involved in the proposed works will be over 400 GRT. Vessels under 400 GRT, are not subject to the legislative requirements around ship waste. However, these vessels will be operated by a responsible competent contractor.

8.2 Emergency Spill Response

- 8.2.1 All vessels 450 GRT and above require an approved SOPEP i.e. procedures and descriptions of actions to be taken in the event of an oil pollution incident. The SOPEP shall contain all information and operational instructions as required by the “Guidelines for the development of the Shipboard Oil Pollution Emergency Plan” as developed by the Organization (IMO). The appendices contain names, telephone, telex numbers, etc., of all contacts referenced in the SOPEP, as well as other reference material.
- 8.2.2 The following measures have been identified regarding emergency spills:
- Work will stop immediately, and the source of the spill will be addressed where possible;
 - Follow vessel SOPEP procedure and emergency spill response;
 - Isolate the source of the spill / leak if safe to do so;
 - Sources of ignition will be eliminated – in case of spilled substance being flammable;
 - The spill will be contained as far as practicable using appropriate spill equipment;
 - All spills will be reported to the appropriate authorities where applicable;
 - The Project Team will be provided with emergency spill response training;
 - Spill kits will be made available at fuel storage and refuelling locations and in individual plant vehicles and vessels; and
 - Spill kits will be replaced after use.

- 8.2.3 The collected contaminant from a spill will be treated as hazardous (Special) waste and will be disposed of appropriately.

8.3 Monitoring and Record Keeping

- 8.3.1 The COSHH record for any chemicals stored on the Project will be kept and updated by the Contractor along with the data sheet for any COSHH Material, chemical or substance. Operating instructions have to be prepared (under the use of current Material Safety Data Sheets (MSDS)). For all used hazardous substances a register has to be maintained.
- 8.3.2 Records will be kept of all visual fuel and oil checks of plant and fuel and oil storage containers by the Contractor.
- 8.3.3 Records will be kept by the Contractor of all spills and actions taken will be noted. Lessons learned will be communicated as appropriate (see also section 12).

8.4 Pollution Prevention Measures Onshore (At Cable Landfall)

- 8.4.1 The pollution measures for the onshore activities are documented in the onshore CEMP (ERM, 2019).

9. MONITORING AND REPORTING PLAN

9.1 Introduction

- 9.1.1 Monitoring and reporting of activities during the Project is required in order to ensure works are carried out as per legislation, consent and licence conditions and in line with the *Employer* requirements. This section describes the monitoring (including auditing) and reporting activities that will be performed during the execution of the Project. These requirements are additional to the external communications requirements detailed in Section 3.

9.2 Monitoring during cable installation

Vessel inspections

- 9.2.1 All vessels utilised on the Project shall be fully compliant with the ISM Code and flag state requirements. Where ISM Code does not apply to a vessel utilised due to vessel size, the vessel operator shall ensure that the vessel has a suitably integrated Safety Management System in use on board the vessel.
- 9.2.2 Table 9.1 outlines a number of environmental documents / certificates the vessels will be expected to provide in order to comply with the environmental aspects of the initial vessel audit and / or ongoing audits throughout the Project work. Documentation will be required to be provided to the *Contractor* (where specified) ahead of operations and prior to HAZID in order that any necessary amendments can be made in advance of works commencing. Pre works vessel checks will be undertaken by the *Contractor*, to ensure all appropriate documentation is on board the vessel.

Table 9-1 Vessel Audit – Environmental Compliance Checklist

Aspect	Document	Action	Responsibility for Provision	Date completed/ reviewed or checked [HOLD: to be completed through works]
Marine Licence and related documentation	Marine Licence	Copy of Marine Licence to be on board vessel throughout works	Vessel	
	EPS Licence	Copy of EPS Licence to be on board vessel throughout works	Vessel	
	Offshore CEMP (incorporating the MMPP)	Copy of Offshore CEMP to be on board vessel throughout works	Vessel	
	FLMAP	Copy of FLMAP to be on board vessel throughout works	Vessel	
	MMO Records	Evidence required at vessel audit	Vessel	
Water Protection	Shipboard Marine Pollution	Plan to be presented prior to the HAZID, and on	Vessel	

Aspect	Document	Action	Responsibility for Provision	Date completed/ reviewed or checked [HOLD: to be completed through works]
	Emergency Plan (SOPEP)	board vessel throughout works		
	Ensure that materials are secured on deck	Evidence required at vessel audit	Vessel	
	Wastes are required to be contained on board vessels for appropriate disposal on return to port	Evidence required at vessel audit	Vessel	
Oily Discharges	Oil Pollution Prevention Certificate	Certificate to be presented prior to the HAZID, and on board vessel throughout works	Vessel	
	Oil Record Book	Record book to be on board vessel throughout works	Vessel	
Ballast Water Management (if applicable)	International Ballast Water Management Certificate	Certificate to be presented prior to the HAZID, and on board vessel throughout works	Vessel	
	Ballast Water Management Plan	Plan to be presented prior to the HAZID, and on board vessel throughout works	Vessel	
	Ballast Water Record Book	Record book to be on board vessel throughout works	Vessel	
Biofouling Management	International Anti-Fouling System Certificate	Certificate to be presented prior to the HAZID, and on board vessel throughout works	Vessel	
	Biofouling Management Plan	Plan to be presented prior to the HAZID, and on board vessel throughout works	Vessel	
	Biofouling Record Book	Record book to be on board vessel throughout works	Vessel	
Waste Management	Waste Management Plan	Plan to be presented prior to the HAZID, and on board vessel throughout works	Vessel	

Aspect	Document	Action	Responsibility for Provision	Date completed/ reviewed or checked [HOLD: to be completed through works]
	Waste Record Book	Record book to be on board vessel throughout works	Vessel	
	Controlled Waste Transfer Note / Special Waste Consignment Note	Notes to be on board vessel at vessel audit and throughout works	Vessel	

9.3 Reporting During / After Installation

End of installation reporting

Reporting requirements for close out of licence to be added when Marine Licence received.

9.4 Incident Response and Reporting

Incident response and reporting are not part of this CEMP and are discussed separately in the Construction Phase Plan (Global Offshore Document Reference 2742-GO-S-TB-0005).

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2 AECOM. (2019b). Pentland Firth East Submarine Cable Replacement: Navigational Risk Assessment Report Kirkwall 19 February 2019.

3 AECOM. (2019c). Pentland Firth East Submarine Cable Replacement: Navigational Risk Assessment Report Thurso 26th March 2019.

4 ERM. (2019) Pentland Firth East Cable Replacement. Shore End Construction Environmental Management Plan (CEMP).

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APPENDIX A

Marine Licence

APPENDIX B

EPS Licence and Basking Shark Licence

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