



# ***WEST OF ORKNEY WINDFARM***

## **Offshore EIA Report, Volume 3, Outline Plan 1: Outline Environmental Management Plan**

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**Approved by S. Kerr**

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# Summary

Prepared by Offshore Wind Power Limited (OWPL) ('the Developer') in accordance with the Institute of Environmental Management and Assessment (IEMA) Guidance on Environmental Management Plans (IEMA, 2008), the purpose of this outline Environmental Management Plan (EMP) is to give an overview of what is likely to be included within the EMP, post-consent. The EMP will provide the over-arching framework for on-site environmental management during the construction and operation of the offshore Project. The EMP will be in accordance with the application to ensure all environmental commitments stated in the Offshore Environmental Impact Assessment (EIA) Report are implemented during the construction, operational and maintenance stages of the offshore Project.

This outline EMP will form the basis of the final EMP. The EMP will be finalised and approved post-consent and ahead of construction, in accordance with the conditions of the relevant Section 36 Consent and/or associated Marine Licences if granted.

The EMP provides information as to how environmental management measures will be managed and implemented in terms of the roles and responsibilities of the Developer's personnel, Contractors and Subcontractors, for the protection of environmental interests during the construction and operation of the offshore Project. It will include the reporting mechanisms that will be put in place to address pollution prevention, waste management, chemicals and dropped objects, as well as management measures to prevent the introduction of invasive non-native species and marine archaeology. The EMP will also include the reporting mechanism to provide the Scottish Ministers and relevant stakeholders with regular updates on construction activity, including any environmental issues that have been encountered and how these have been addressed.

Following approval by the Scottish Ministers, the EMP will represent a 'live document' and will be regularly reviewed and updated by the Developer at intervals agreed by the Scottish Ministers to ensure that updated information on construction methods and operations, including updated working practices is communicated to Scottish Ministers and relevant stakeholders.

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# 1. Introduction

## 1.1 Purpose

This outline Environmental Management Plan (EMP) has been prepared by Offshore Wind Power Limited (OWPL), hereafter referred to as ‘the Developer’, and in accordance with the Institute of Environmental Management and Assessment (IEMA) Guidance on Environmental Management Plans (IEMA, 2008). This outline EMP supports the Offshore Environmental Impact Assessment (EIA) Report, relevant to the offshore elements of the West of Orkney Wind Farm (hereafter referred to as ‘the offshore Project’).

This outline EMP will form the basis of the final EMP. The EMP will be finalised and adopted post-consent, ahead of construction, following approval by Scottish Ministers in accordance with relevant conditions of the Section 36 Consent and associated Marine Licences.

## 1.2 Objectives

The EMP provides the over-arching framework for on-site environmental management for the offshore Project during construction and operation. It will be in accordance with the application to ensure all environmental commitments stated in the Offshore EIA Report are implemented during the construction, operational and maintenance stages of the offshore Project. Once finalised all the Developer’s personnel, Contractors and Sub-contractors involved in the offshore Project must comply with the EMP.

## 1.3 Consent compliance

The EMP fulfils the requirements of the consent conditions for the preparation of an EMP as outlined in Table 1-1. Details of where specific consent condition requirements are addressed, are also provided in Table 1-1.

**Table 1-1 Consent conditions relevant to the EMP**

Consent reference	Condition	Relevant section
[To be added post-consent]		

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## 1.4 Scope of the plan

The EMP provides the environmental management and mitigation measures put in place to minimise any adverse impacts on the environment associated with the offshore Project, and provide practical guidance on procedures for incidents and compliance reporting to all those involved in the construction, operation and maintenance stages of the offshore Project.

The EMP will cover the following:

- Offshore Project personnel, roles, responsibilities and chain of command in relation to environmental management, this must also include at contractors or sub-contractors;
- The means of communicating and reporting environmental issues and compliance associated with the EMP to Marine Directorate – Licensing Operations Team (MD-LOT)/Scottish Ministers and relevant stakeholders;
- The competence and environmental training expected of all personnel involved with the offshore Project;
- Procedures associated with dropped objects;
- Marine Pollution Prevention and control method statement, including contingency plans (via the Marine Pollution Contingency Plan (MPCP));
- Chemical management;
- Waste management;
- Marine Biosecurity and Invasive Non-Native Species (INNS) management; Unexploded Ordnance (UXO) management; and

- Marine archaeology management.

Environmental management during decommissioning of the offshore project will be covered by the Decommissioning Programme in accordance with Section 105(2) of the Energy Act 2004 and the 'Decommissioning of Offshore Renewable Energy Installations in Scottish waters or in the Scottish part of the Renewable Energy Zone under The Energy Act 2004: Guidance notes for Industry (in Scotland)' (Scottish Government, 2022).

## 1.5 Other relevant documents and consent plans

Once finalised, the EMP will form one of several post-consent plans produced for the offshore Project that will be required under conditions of the Section 36 Consent and associated Marine Licences for the offshore Project. At this stage, the list of final consent plans that will be required is not known. However, a number of outline plans have been prepared and submitted with the application. These outline consent plans include:

- OP2: Outline Marine Mammal Mitigation Protocol (MMMP);
- OP3: Outline Fisheries Management and Mitigation Strategy (FMMS);
- OP4: Outline Navigational Safety and Vessel Management Plan (NSVMP);
- OP5: Outline Aids to Navigation Management Plan (ANMP);
- OP6: Outline Lighting and Marking Plan (LMP); and
- OP7: Outline Biosecurity Enhancement Plan.

The linkages between the EMP and other consent plans likely to be required are listed in Table 1-2. The consent plans will be prepared in consultation with key stakeholders for submission to, and approval by, Scottish Ministers (via MD-LOT) prior to the commencement of construction and in line with the Section 36 Consent and/or associated Marine Licence Conditions.

These documents will reflect the commitments made in the Offshore EIA Report and any associated conditions of consent or requirements agreed with the relevant authorities.

**Table 1-2 Links with other consent plans**

Consent plan / document	Linkage with EMP
Construction Method Statement (CMS) Construction Programme (CoP)	Specifies the offshore Project's construction methods, setting out good practice construction measures and how agreed mitigation measures from the Offshore EIA report, associated documents, consents and those stated within this EMP are implemented during construction. Once the CMS and CoP have been approved by the Scottish Ministers, this EMP will be updated where required in order to reference relevant parts of the CMS and CoP.
Cable Plan(s) (CaPs)	The CaPs will contain details on environmental sensitivities and design considerations to mitigate, as far as possible, the effects of cable laying and associated protection during construction and the potential effects of the operation of cables during the operation and maintenance stage. The CaPs will include the following: <ul style="list-style-type: none"> <li>• Cable locations, cable installation techniques, timings and duration;</li> <li>• The results of monitoring or data collection work which will inform cable routing;</li> <li>• Technical specification of the cables, electro-magnetic field strengths and shielding requirements;</li> <li>• A Cable Burial Risk Assessment ("CBRA");</li> <li>• Post-construction and operational survey methodologies for the operation and maintenance stage; and</li> </ul>

Consent plan / document	Linkage with EMP
Emergency Response Co-operation Plan (ERCoP)	<ul style="list-style-type: none"> <li>Methodologies for cable inspection during operation and maintenance with measures to address and report to the Scottish Ministers any exposure of cables.</li> </ul>
Fisheries Management and Mitigation Strategy	Ensures the co-operation with the Maritime and Coastguard Agency (MCA) by detailing the design parameters of the offshore Project, emergency contact details, and processes to be followed in the event of an emergency. The ERCoP will adhere to the template and guidance provided by MCA.
Operation and Maintenance Programme (OMP)	Sets out the approach to commercial fisheries liaison and mitigation during the construction and operation of the offshore Project and provides information on the role and responsibility of the Developer Fisheries Liaison Officer (FLO).
Piling Strategy (PS)	Sets out the procedures and good working practices for the operation and maintenance stage of the offshore Project, considering environmental sensitivities which may affect the timing of the activities.
Piling Strategy (PS)	Details the piling methods and duration including the mitigation and monitoring to be employed during the piling activities to mitigate underwater noise impacts on noise sensitive species.
Project Environmental Monitoring Programme (PEMP)	Outlines the monitoring strategy for the proposed monitoring to be undertaken pre-construction, during construction and post construction (operational) and decommissioning stages. This EMP will be updated to reflect the offshore Project environmental monitoring results as appropriate.
Navigational Safety and Vessel Management Plan (NSVMP)	The NSVMP provides information on vessel management and navigational safety for the offshore Project. It will provide the required information to the MD-LOT on how potential risks and impacts to other marine users and navigational risks will be minimised and mitigated.

## 1.6 Structure of the plan

This outline EMP is divided into three parts:

- Part 1 – Implementation of the EMP. This section provides information on the management and implementation of the EMP, including roles and responsibilities, lines of communication and training;
- Part II – Environmental Management, Mitigations and Controls. This section details the key environmental management and reporting systems to be put in place as well as the environmental management, mitigation and control measures identified in the Offshore EIA Report and that arise from commitments in relation to the Marine Licences and S36 consent;
- Part III - Appendices - including reporting proformas and sub-plans, as listed below:
  - Appendix A – Commitments Register;
  - Appendix B – Contacts Sheet;
  - Appendix C – Marine Pollution Contingency Plan (MPCP);

- 
- Appendix D – Invasive Non-Native Species Management Plan (INNSMP);
  - Appendix E – Waste Management Plan;
  - Appendix F – Written Scheme of Archaeological Investigation (WSI) and Protocol for Archaeological Discoveries (PAD); and
  - Appendix G – Dropped Objects Form.

## 1.7 Location of the plan

Details on where copies of the EMP are located will be included within the final EMP. At this stage, it is envisaged that copies will be located at:

- The West of Orkney Windfarm Office;
- All Site offices (including Contractors and Subcontractors);
- With the Environmental Clerk of Works (ECoW(s)); and
- All construction, operation and maintenance vessels.

## 1.8 Document control

Following approval by Scottish Ministers, the EMP will represent a 'live document' and will be regularly revised and updated throughout each stage of the offshore Project (construction, operation and maintenance) as relevant, to ensure the information is kept up to date, at intervals agreed with the MD-LOT. Linkages exist between a number of offshore Consent Plans as highlighted in Section 1.5 within Table 1-2. 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 Quality, Health, Safety, Environment and Quality (QHSE) Manager (or an equivalent role identified post-consent) will ultimately have responsibility for ensuring that Health, Safety and Environment (HSE) related documents are revised in accordance with the relevant timescales.



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## 2. Project background

The Developer is proposing the development of the West of Orkney Windfarm ('the Project'), an Offshore Wind Farm (OWF), located at least 23 kilometres (km) from the north coast of Scotland and 28 km from the west coast of Hoy, Orkney.

The offshore Project will consist of Wind Turbine Generators (WTGs) and all infrastructure required to transmit the power generated by the WTGs to shore. The key offshore components of the offshore Project will include:

- Up to 125 WTGs with fixed-bottom foundations (monopile, piled jacket or suction bucket jacket);
- Up to five High Voltage Alternating Current (HVAC) Offshore Substation Platforms (OSPs);
- Up to 500 km of inter-array cables;
- Up to 150 km of interconnector cables; and
- Up to five offshore export cables to landfalls at Greeny Geo and/or Crosskirk at Caithness, with a total length of up to 320 km (average of 64 km per offshore export cable).

The offshore Project boundary (Figure 2-1) includes the array area and the offshore Export Cable Corridor (ECC). The array area reflects the Option Agreement Area (OAA) awarded to the Developer through the ScotWind Leasing Round. Therefore, the offshore Project boundary encompasses:

- OAA – where the WTGs and associated foundations and supporting structures, inter-array cables, interconnector cables and the OSFs (including offshore export cable connections) will be located;
- Offshore ECC – within which the export cables will be located; and
- Landfall (up to MHWS) – where the offshore export cables come ashore and interface with the onshore Project.

[Section to be updated post-consent with final details of offshore Project]

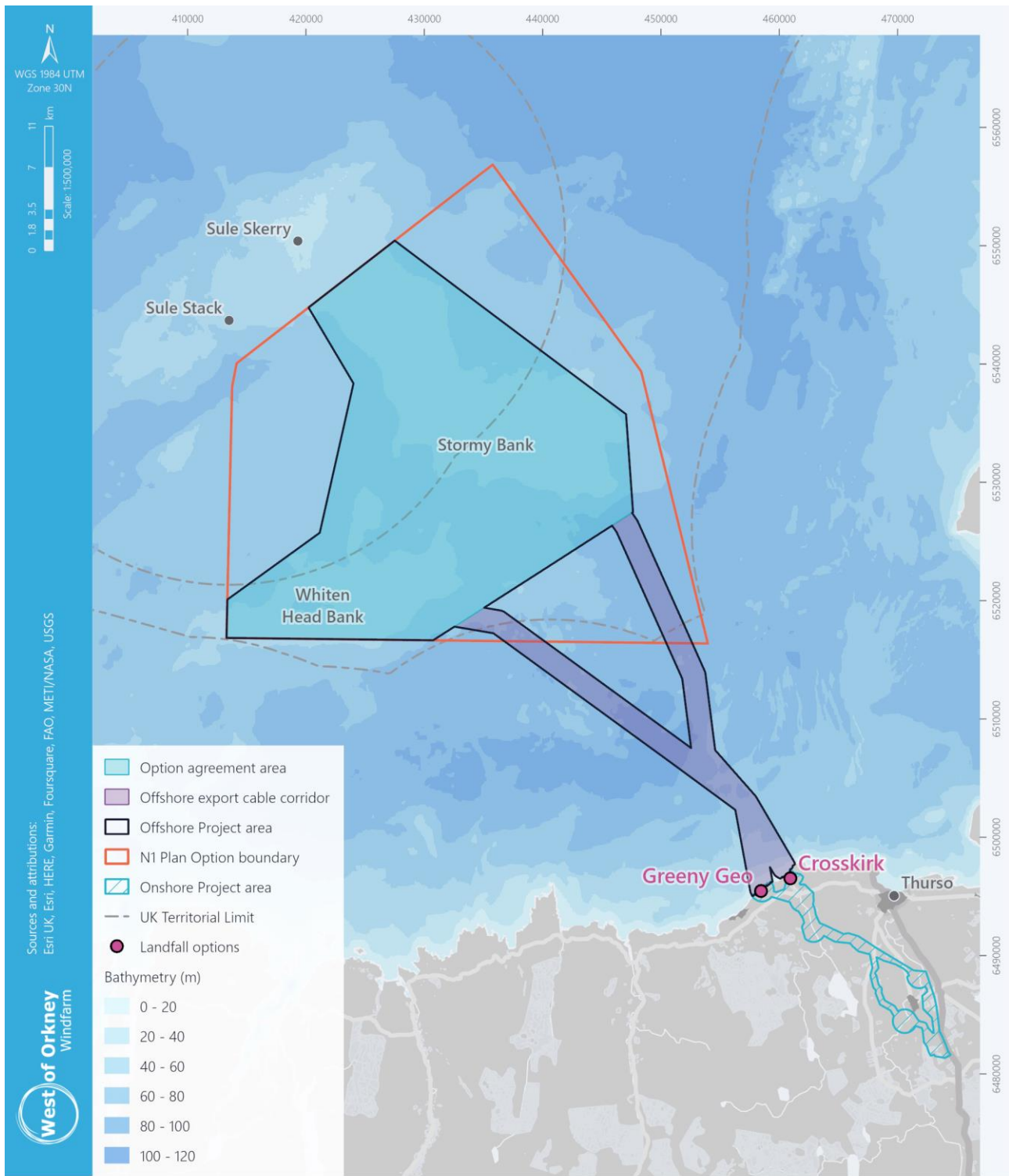


Figure 2-1 Offshore Project boundary

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The following consents and Marine Licences are required for the offshore Project:

- Section 36 consent under the Electricity Act 1989 for generating stations with capacity of > 50 megawatts (MW) (outwith 12 nm) and > 1 MW (within 12nm). This consent applies to the WTGs, WTG foundations, inter-array cables, and associated scour and cable protection; and
- Marine Licences under the Marine and Coastal Access Act 2009 and the Marine (Scotland) Act 2010 are required for construction or deposition in or over the sea, or on and under the seabed. Separate Marine Licences for the offshore Project are being sought for the generation and transmission assets, as follows:
  - Generation assets include foundations, WTGs, inter-array cables and the scour and cable protection associated with these assets; and
  - Transmission assets include the OSPs, interconnector cables and offshore export cables and the scour and cable protection associated with these assets.

A full list of consents and marine licences granted will be listed in Table 2-1 on drafting of the final EMP post-consent.

**Table 2-1 Consents granted**

Consents granted	Date of consent	Reference number
[To be completed post-consent]		

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## 3. Part 1: Implementation of the EMP

### 3.1 Roles and responsibilities

This section outlines the roles and responsibilities associated with the implementation of the EMP. All of the Developer personnel, Contractors and Subcontractors will be expected to comply with the requirements of the EMP and all relevant associated documents. Contractors and Subcontractors may have additional procedures, but will comply with the mitigation and controls within the EMP as a minimum. Table 3-1 describes the indicative roles and responsibilities relevant to the EMP, to be finalised post-consent. Additionally, it will be further refined as part of any required updates to this EMP during the various stages of the offshore Project.

**Table 3-1 Roles and responsibilities for the implementation of the EMP**

Role	Contact details	Responsibility
<b>Developer Windfarm roles</b>		
Project Director	[To be included post-consent]	Responsible for ensuring compliance with and delivery of the EMP through securing sufficient resources and implementing appropriate processes throughout the offshore Project. These will be expanded on in the final EMP.
QHSE Manager	[To be included post-consent]	Responsible for the coordination, management and monitoring of QHSE matters that will compliment this EMP. The QHSE Manager is responsible for providing QHSE support, advice and guidance, will monitor QHSE performance and will be responsible for reducing the environmental effects of the offshore Project as far as practicable during construction and operation and maintenance works. These will be expanded on in the final EMP post-consent.
HSE Lead	[To be included post-consent]	The HSE lead is responsible for the day to day contact with Contractors and carrying out any inspections, audits and investigations. These will be expanded on in the final EMP post-consent.
Environmental Manager	[To be included post-consent]	Responsible for managing ongoing compliance with the final EMP and all supporting documents, with support from the Package Managers. These will be expanded on in the final EMP post-consent.
Head of Construction	[To be included post-consent]	Responsible for overseeing the construction activities of the offshore Project ensuring the necessary resources are available to the Package Managers in order to implement the environmental management measures detailed within this EMP. These will be expanded on in the final EMP post-consent.
Package Managers	[To be included post-consent]	Package Managers will support the Environmental Manager with similar responsibilities but focussed on their specific package/work streams. These include engineering work packages covering marine installation, WTGs and transmission systems during construction. These will be expanded on in the final EMP post-consent.
Marine Coordinator	[To be included post-consent]	The Developer will establish a Marine Coordination Centre (MCC), at which the Marine Coordinator will be responsible for managing and monitoring vessel activity. This will include the compilation of relevant documents for communication to the fishing industry, such as Notices to Mariners (NtMs), Information to Sea Users Bulletins (Kingfisher Bulletin) and weekly notices of operations (WNoO) that will be issued

Role	Contact details	Responsibility
		to the FLO for distribution to the fishing industry via the Fishing Industry Representatives (FIRs). These will be expanded on in the final EMP post-consent.
Stakeholder Engagement Manager (SEM)	[To be included post-consent]	The SEM will be in position throughout the offshore Project lifetime to facilitate engagement with the community. The SEM will cooperate with the Community Liaison Manager (CLM) appointed by the Contractor. These will be expanded on in the final EMP post-consent.
<b>Subcontractor, contractor and supporting roles</b>		
Independent Environmental Clerk of Works (ECoW)	[To be included post-consent]	Responsible for the quality assurance of final draft versions of all consent plans and programmes required under the Section 36 Consent and Marine Licences, providing on-going advice, monitoring and reporting of compliance with the consent conditions and all environmental mitigation and monitoring measures included in the application for the offshore Project. The ECoW will also be involved with providing environmental training and will establish communication and reporting protocols for issues relating to the environment. These will be expanded on in the final EMP post-consent.
Contractor Environmental Manager	[To be included post-consent]	The Contractor's Environmental Manager will ensure the Contractor compliance with all environmental responsibilities in the EMP and supporting documents during the construction and operation and maintenance stages of the offshore Project. These will be expanded on in the final EMP post-consent.
Community Liaison Manager (CLM)	[To be included post-consent]	The CLM will act as a point of contact for residents neighbouring the Project and local authorities. These will be expanded on in the final EMP post-consent.
Retained Archaeologist/contractor	[To be included post-consent]	The Retained Archaeologist will be in place throughout the construction stage, and, if required, during the operation and maintenance stage, and will support the Environmental Manager in relation to archaeological matters. These will be expanded on in the final EMP post-consent.
Marine Mammal Observer (MMO) (if required)	[To be included post-consent]	A Marine Mammal Observer may be in place during noisy activities, such as piling and other construction activities if required. These activities and the roles and responsibilities associated with the Marine Mammal Observer are outlined in OP2: MMMP. These will be expanded on in the final EMP post-consent.
Fisheries Liaison Office (FLO)	[To be included post-consent]	A FLO has been appointed for the offshore Project and will continue to be appointed for the construction and operation and maintenance stage. The FLO will develop a positive working relationship with the local fishing industry and will have a solid understanding of the potential interactions between the offshore Project and the local fishing industry. The FLO will be the interface between the Developer, Contractors and subcontractors and the fishing industry, and may also represent the Developer at fisheries meetings. The FLO will act as a primary point of contact for the fishing industry where communication with the Developer is required and will also disseminate information to the fishing industry (potentially via the FIR). The FLO will maintain a

Role	Contact details	Responsibility
		database of fisheries contacts and organisations to ensure Project-related information is circulated in a timely manner. The FLO will also assist the Developer in resolving fisheries issues as they arise and facilitate the relocation of static fishing gear, as required. These will be expanded on in the final EMP post-consent.
Offshore Fisheries Liaison Officer (OFLO)	[To be included post-consent]	The main role of the OFLO is to minimise any at-sea conflict between the offshore Project and fishing activities during the construction and operation and maintenance stage. The OFLO will be stationed on construction vessels, as required, and will act as an on-site point of communication for fishing vessels. The OFLO will maintain contact with the FLO (based onshore) and the Developer in order to communicate relevant information to fishing vessels. The OFLO will also record details of any fishing activity at the offshore Project when on-site as required to the Developer and the FLO. These will be expanded on in the final EMP post-consent.
Fishing Industry Representatives (FIRs)	[To be included post-consent]	The FIR(s) will be the direct point of contact(s) for the local fishing industry and will be a key support to the FLO. The FIR(s) will circulate information from the Developer and the FLO, as required. The FIR(s) may attend fisheries stakeholder meetings and will liaise directly with local fishers around their concerns on the offshore Project to report back to the FLO. These will be expanded on in the final EMP post-consent.

### 3.1.1 Contact details

An offshore Project Contacts Sheet (Appendix B) will be compiled prior to the commencement of construction of the offshore Project. This list will include contact details of all Developer, Contractor/Subcontractor and relevant third parties. This list will be made available to relevant personnel and will be regularly updated throughout the construction and operation and maintenance stages.

As a minimum, the Contacts Sheet will include the following information:

- Company/organisation;
- Role;
- Name;
- Telephone/mobile number;
- Email address; and
- Office location.

## 3.2 Communication and reporting procedures

### 3.2.1 Internal communications

Internal communications will be finalised post-consent, but are likely to involve regular progress meetings before and during construction, operation and maintenance activities, between the Developer personnel and relevant Contractors / Subcontractors, including the EcoW as required.

Reviews of Contractor / Subcontractor Risk Assessment and Method Statements (RAMS) will be undertaken and copies of the relevant consents will be provided to the Contractors and/or Subcontractors. They will also be made aware of the consent obligations associated with a particular activity via environmental training and awareness sessions detailed in Section 3.3.

All Developer personnel, Contractors and Subcontractors will report any environmental concerns or issues, including on-site potential or actual environmental incidents or emergencies, immediately.

### 3.2.2 External communications

The Developer Project team will liaise with MD-LOT and relevant external Stakeholders on matters relating to environmental management. External communications, notifications and reporting including of any environmental incidents in relation to the offshore Project activities will be carried out in accordance with the commitments included in the Offshore EIA Report and the requirements of the consent conditions. The external communications required for reporting on activities are listed in Table 3-2. The details of this table will be finalised post-consent.

**Table 3-2 Methods of reporting on activities to the relevant external stakeholders**

External communication	Relevant stakeholder and methods
ECoW Compliance Reporting	[To be completed post-consent]
West of Orkney Windfarm Consenting Updates	[To be completed post-consent]
Chemical Usage	[To be completed post-consent]
Transportation Audit Report (TAR)	[To be completed post-consent]
Regional Advisory Group (RAG)	[To be completed post-consent]
Commercial Fisheries Working Group (CFWG)	[To be completed post-consent]
Notices to Mariners	[To be completed post-consent]
Weekly Notice of Operations	[To be completed post-consent]
Vessel Reporting	[To be completed post-consent]
Noise registry	[To be completed post-consent]

These will be further refined and outlined in the final EMP and any other post-consent plans as required.

#### 3.2.2.1 Environmental incidents

The potential environmental incidents that could occur during the offshore Project construction, and operation and maintenance stages, along with the methods of reporting such incidents, are detailed in Table 3-3. The details of this table will be finalised post-consent.

**Table 3-3 Methods of reporting on incidents to the relevant external stakeholders**

External communication	Relevant stakeholder and methods
Dropped Objects Reporting	See Section 4.6
Pollution Incident	See Section 4.2
Non-Compliance Reporting	Non-compliance proforma, as required
Archaeological Reporting	See Section 4.5

#### 3.2.2.2 Contractor communications

During the various stages of the offshore Project, designated personnel on each vessel will be responsible for providing daily progress reports, including environmental management, to the Developer. The details of the reporting methods and requirements will be finalised post-consent and following appointment of contractors.

#### 3.2.2.3 Environmental Clerk of Works communications and reporting

The ECoW will play a key role in the delivery of the EMP (see Table 3-1). They will be responsible for establishing communication channels with key personnel across the offshore Project and will provide support as and when required.

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### 3.3 Methods for environmental training and awareness

All personnel, including Developer personnel and Contractors, will have the required skills, education and training to perform their tasks in accordance with the EMP. Contractors and Subcontractors will ensure that they have adequate environmental management resources and procedures in place for the duration of the offshore Project scope of works that they are contracted to undertake. To ensure adherence to the EMP and environmental and consents requirements, all Contractors' documentation relating to good environmental practice and environmental commitments will be reviewed by the Developer.

The Environmental Manager, Contractor's Environmental Manager and/or ECoW will be responsible for providing environmental training and promoting awareness regarding environmental management. Toolbox talks, inductions and environmental training will be supported by the ECoW for expert advice and support. Some potential methods for environmental training and awareness are detailed in Table 3-4. The details of this table will be finalised post-consent.

**Table 3-4 Methods for environmental training and awareness**

Method	Description
Inductions	Environmental induction training presented to all the personnel working and visiting the site (the Developer personnel, Contractor / Subcontractor employees, suppliers and other visitors) to inform them of the content of the EMP that is applicable to them.
Toolbox Talks	Toolbox talks delivered by specialist staff on-site to discuss any update to the EMP relevant to the personnel on-site, to include specific information on risks and mitigations to be implemented for specific activities they are involved in, together with environmental issues arising on-site to ensure continuous training and to reinforce environmental awareness.
Environmental Training	Environmental awareness training covering a variety of topics not limited to, but including training on the use of spill kits, waste management, fuel handling and Ecologically and archaeologically sensitive areas. Contractors will 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.
Lessons Learned	Either as part of or, in addition to any audit, inspection or investigation, the Contractors shall conduct 'lessons learned' sessions as required. As a minimum, the Developer Project Team and the Contractors shall conduct a joint-lessons learned session on an annual basis, but may consider these relevant at different stages of the project. Should this process, or any other, generate environmental information worth sharing, the Project Team shall inform MD-LOT and the wider industry.
Other awareness materials	Environmental notice board(s) prominently displayed to permit all personnel to be able to review a notice board on a daily basis. The type of information to be provided on the notice boards includes: <ul style="list-style-type: none"><li>• Description of the key environmental risks alongside the risk mitigation measures;</li><li>• Location of emergency response equipment; and</li><li>• Key contact numbers and responsible personnel.</li></ul>



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**Method****Description**

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Environmental labels and signs used across the site to promote good environmental practice.

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## 4. Part 2: Environmental management, mitigations and controls

This section of the EMP translates, into an appropriate format, the commitments stated in the Offshore EIA report to allow for their practical implementation by the Developer, Contractors and Subcontractors. It also details the environmental management, mitigation and control measures identified in the Offshore EIA report and any other commitments generated from the Marine Licences and Section 36 consent (once granted). This follows the IEMA Practitioner Guide, which states that “the overall objective of an EMP is to provide a continuous link or ‘bridge’ between the design stage of a Proposed Development, conditions attached to consents, Proposed Development construction, and into the operational phase” (IEMA, 2008).

### 4.1 Environmental management systems and compliance

#### 4.1.1 Environmental management systems

The EMP will form part of an Integrated Management System (IMS) that will guide the practical implementation of the commitments stated in the Offshore EIA report. All Contractors will have an environmental management system (EMS) appropriate to their scope of work.

#### 4.1.2 The commitments register

The complete list of environmental management, mitigation and control commitments will be provided in the Commitments Register (Appendix A1). The Commitments Register will be derived from the commitments made within the Offshore EIA Report, Section 36 consent and Marine Licence conditions and as such, adherence to the EMP and accompanying appendices, will ensure compliance with the Section 36 consent and Marine Licences for the offshore Project. It will also serve as an audit trail of compliance throughout the construction and operation and maintenance stages of the offshore Project.

The Commitments Register will be updated, reviewed and approved internally to ensure compliance in advance of each stage of the offshore Project and will be maintained throughout.

#### 4.1.3 Auditing / monitoring of compliance

Compliance with the EMP will be monitored by carrying out a number of audits during the various stages of the offshore Project. This will ensure all Project personnel, Contractors and Subcontractors are aware of the commitments and measures outlined within the EMP, as well as other legislation and policies relevant to their activities. Any non-compliance will be subject to a risk assessment to identify appropriate remedial measures and will be reported to relevant stakeholders as required.

### 4.2 Marine pollution prevention and contingency planning

This will detail the measures to be put in place to minimise any impacts due to the release of pollutants during construction and operation and maintenance stages of the offshore Project. These will be set out in the MPCP (Appendix A3).

Contractors and Subcontractors will be expected to comply with the requirements of the MPCP.

### 4.3 Biosecurity and invasive non-native species (INNS)

The measures to be adopted for the management of marine Invasive Non-Native Species (INNS) during construction and operation and maintenance stages of the offshore Project will be set out in the INNSMP (Appendix A4). Contractors and subcontractors will be expected to supply relevant documents to demonstrate compliance with the requirements of the INNSMP.

### 4.4 Waste management

A Waste Management Plan (WMP) (Appendix A5) will be prepared to deal with all aspects of waste produced during construction and operation and maintenance stages of the offshore Project (updated as necessary throughout the offshore Project life cycle, as described in Section 1.8). The WMP will use the waste hierarchy of reduce, reuse and recycle wherever

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possible. Details of contingency planning in the event of an accidental release of materials which could cause harm to the environment will be covered by the MPCP.

## 4.5 Marine archaeology

The procedures to be followed on discovering any marine archaeology during the construction and operation and maintenance stages of the offshore Project will be set out in the Written Scheme of Investigation (WSI) and Protocol for Archaeology Discoveries (PAD) (Appendix A6).

## 4.6 Dropped objects

Any object dropped by the Project personnel, Contractors or Subcontractors regarded as a hazard to safe navigation will be recorded and reported to MD-LOT via the Marine Scotland – DROPOB1 - Offshore Wind & Marine Renewables Dropped Objects Form (Appendix A7).

## 4.7 UXO management

An Unexploded Ordnance (UXO) survey and clearance programme will be completed prior to start of construction activities, in order to reduce the risk of discovering previously unidentified UXO to As Low As Reasonably Practicable (ALARP). Should a UXO be discovered after the survey and clearance programme is completed the Developer will be informed immediately via the relevant channels (details to be provided post-consent).

Should a UXO need to be detonated during construction, MD-LOT will be consulted and the Joint Nature Conservation Committee (JNCC) guidelines for mitigating impact upon marine mammals will be followed, as detailed in OP2: MMMP (note that a separate Marine Licence and EPS Licence will be applied for).

## 4.8 Chemical management

The Developer will ensure that all chemicals being used during the construction, operation and maintenance stages of the offshore Project have been approved by MD-LOT prior to use in an open system. For any chemicals used in a closed system, MD-LOT will be notified prior to use. Further information will be provided in the EMP post-consent.

## 4.9 Marine species

In the event of a wildlife incident occurring as a result of activity associated with the offshore Project (e.g. injury to a marine mammal, or an observed fish or bird mortality), the incident will be reported to the relevant person as soon as possible who will then follow up with the relevant regulatory authority (details of the reporting procedure will be provided in the EMP post-consent).

The area around the offshore Project may be visited regularly by marine species that are sensitive to noise disturbance. The Developer shall ensure that all personnel adhere to the Scottish Marine Wildlife Watching Code (SMWWC), vessel management procedures (outlined within the NSVMP) and any appropriate European Protected Species (EPS) Licence conditions during all stages of the offshore Project (from construction to cessation of electricity generation). The following documents will be prepared to manage and mitigate the effects on marine animals:

- MMMP;
- Piling Strategy (PS);
- Navigational Safety and Vessel Management Plan (NSVMP); and
- CaP.

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

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## 5. References

Institute of Environmental Management and Assessment (IEMA) (2008). Environmental Management Plans, Best Practice Series, Volume 12, December 2008.

Scottish Government (2022). The Energy Act 2004 Decommissioning of Offshore Installations and Decommissioning of Offshore Renewable Energy Installations in Scottish waters.

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## 6. Abbreviations

The following table will be updated for the final EMP:

Term	Definition
ALARP	As low as reasonably practicable
ANMP	Aids to Navigation Management Plan
CBRA	Cable Burial Risk Assessment
CaPs	Cable Plan(s)
CFWG	Commercial Fisheries Working Group
CLM	Community Liaison Manager
CMS	Construction Method Statement
CoP	Construction Programme
ECC	Export Cable Corridor
ECoW	Environmental Clerk of Works
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMS	Environmental Management System
EPS	European Protected Species
ERCoP	Emergency Response Co-operation Plan
FIR	Fishing Industry Representative
FLO	Fisheries Liaison Officer
FMMS	Fisheries Management and Mitigation Strategy
HSE	Health, Safety and Environment
HVAC	High Voltage Alternating Current
IEMA	Institute of Environmental Management and Assessment
IMS	Integrated Management System
INNSMP	Invasive Non-Native Species Management Plan
INNS	Invasive Non-Native Species
JNCC	Joint Nature Conservation Committee
km	kilometre
LMP	Lighting and Marking Plan
MCA	Maritime and Coastguard Agency

<b>Term</b>	<b>Definition</b>
MCC	Marine Coordination Centre
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
MMMP	Marine Mammal Mitigation Protocol
MMO	Marine Mammal Observer
MPCP	Marine Pollution Contingency Plan
MD-LOT	Marine Directorate - Licensing Operations Team
MW	Megawatt
NSVMP	Navigational Safety and Vessel Management Plan
OAA	Option Agreement Area
OFLO	Offshore Fisheries Liaison Officer
OMP	Operation and Maintenance Programme
OSPs	Offshore Substation Platforms
OWF	Offshore Wind Farm
OWPL	Offshore Wind Power Limited
PAD	Protocol for Archaeological Discoveries
PEMP	Project Environmental Monitoring Programme
PS	Piling Strategy
QHSE	Quality, Health, Safety and Environment
RAG	Regional Advisory Group
RAMS	Risk Assessment and Method Statements
SEAR	Safety and Environmental Awareness
SEM	Stakeholder Engagement Manager
SMWWC	Scottish Marine Wildlife Watching Code
TAR	Transportation Audit Report
UXO	Unexploded Ordnance
WMP	Waste Management Plan
WSI	Written Scheme of Investigation
WTG	Wind Turbine Generator

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## 7. Glossary of terms

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Term	Definition
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[to be included post-consent]

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# A1. Commitments register

All environmental commitments generated from the Offshore EIA Report and any other relevant documents will be detailed here on drafting of the final EMP.

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EIA receptor	Details of mitigation	Purpose / general description of commitment	Relevant consent plan(s)
[to be included post-consent]			

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## A2. Contacts sheet

To be completed on drafting of the final EMP.

Name	Role	Company	Phone number	Email address	Office location
[to be included post-consent]					

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## A3. Marine Pollution Contingency Plan

The MPCP will be drafted post-consent and will include the procedures to safe guard the marine environment from any potential accidental pollution events associated with Tier 1 oil or fuel spills during the construction, operation and maintenance stages of the offshore Project. The MPCP will be drafted post-consent but will include sections similar to the following.

### Introduction

This section will provide background to the offshore Project, the consent requirements, an overview of the scope and structure of the MPCP, including objectives of the MPCP, and the key contacts for emergency situations (additional contacts will be listed within the appendices). It will also identify other consent plans and documentation that are relevant to pollution prevention and contingency planning and the linkages between those plans and documents and the MPCP.

### Roles and responsibilities

This section will describe the roles and responsibilities relating to the implementation of the MPCP. The roles likely to be included are listed in Table A3-1 MPCP roles and responsibilities below.

**Table A3-1 MPCP roles and responsibilities**

Role	Contact details	Responsibility
The Developer	[to be included post-consent]	Ensuring Contractors and Subcontractors take appropriate responsibility for pollution events.
Developer Environmental Manager	[to be included post-consent]	Responsible for the overall preparation and implementation of the MPCP.
The Environmental Clerk of Work	[to be included post-consent]	Providing quality assurance for the MPCP, ensuring it is implemented in line with consent conditions and is responsible for reporting on compliance and incidents.
Marine Coordinator	[to be included post-consent]	Main point of contact should a pollution event occur. Will also oversee any pollution responses.
Contractors and Subcontractors	[to be included post-consent]	They will be expected to comply with the Developer's MPCP as well as produce their own. They will also be expected to ensure their staff have adequate pollution prevention and response training.
Spill Response Contractor	[to be included post-consent]	Required to be in place prior to construction and provide oil spill response as required.

### Training and exercises

This section will detail the types of pollution prevention training that will be provided and the intervals at which they will be given.

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## Pollution sources and risk assessment

This section will provide information on the potential sources of pollution, the associated level of risk, and the level of response likely to be required, based on the tier classification detailed in Table A3-2 Pollution tier classifications below. It will also detail any control measures and monitoring requirements that have been established to mitigate against possible pollution events, in line with measures identified within the Offshore EIA report.

**Table A3-2 Pollution tier classifications**

Tier	Classification
Tier 1	Response within the capability of onsite resources
Tier 2	Response requires regional resources
Tier 3	Response requires national/international resources

## Pollution incident response strategies

This section will detail the specific procedures to be adhered to, both at sea and along shorelines, in the event of a marine pollution incident. It will include:

- Pollution incident response procedures to be adhered to in response to a marine pollution incident from a vessel or offshore Project installation;
- Reporting requirements and procedures;
- Response checklist detailing the key actions to be implemented in the event of a pollution incident; and
- Spill response strategies to be implemented, and the associated procedures for dealing with any affected wildlife, based on the tier classification detailed in Table A3-2:
  - Tier 1 response for the minimal release of oil to the marine environment, which the Development can respond to within its own capacity; and
  - Tier 2/3 response where additional support is required from contractors or national pollution response services.

## Appendices

A Spill Risk Proforma (CG77 POLREP – Pollution Reporting Form), and Non-compliance Reporting Proforma will be included in the appendices of the MPCP, as well as a contacts directory for non-emergency contacts.

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# A4. Invasive Non-Native Species Management Plan

The Invasive Non-native Species Management Plan (INNSMP) will be drafted post-consent and will follow the guidance of NatureScot's 'Marine Biosecurity Planning Guidance for Producing Site and Operation-Based Plans for Preventing the Introduction of Non-Native Species', which highlights the required control measures in order to prevent the introduction or spread of INNS as a consequence of the offshore Project. The Developer shall ensure appropriate biosecurity management practices are implemented during construction and operation and maintenance stages of the offshore Project to reduce the risk of transferring INNS to and from the site to a minimum.

The INNSMP will be drafted post-consent but will include sections similar to the following.

## Introduction

This section will provide a background to the offshore Project and the INNSMP, details of all relevant UK Guidance and legal requirements around the management of INNS, as well as any linkages with other consent plans. It will also provide an overview of the scope and structure of the INNSMP.

## Roles and responsibilities

This section will describe the roles and responsibilities relating to the implementation of the INNSMP. The roles likely to be included are listed below in Table A4-1.

**Table A4-1 INNSMP roles and responsibilities**

Role	Contact details	Responsibility
The Developer	[to be included post-consent]	Ensuring the implementation of the INNSMP and monitoring and clearance/disposal of INNS at the offshore Project.
ECoW	[to be included post-consent]	Providing quality assurance for the INNSMP, ensuring it is implemented in line with consent conditions and reporting any incidents with INNS.
Contractors and Sub-contractors	[to be included post-consent]	They will be expected to comply with the INNSMP and provide early notification if INNS are present.

## Potential pathways for INNS introduction and/or spread

This section will provide an assessment of site-specific biosecurity risks, including potential pathways of INNS introduction and/or spread.

## Biosecurity control measures

This section will detail the biosecurity control measures to be implemented to protect against negative INNS impacts, including a contingency plan in case of introduction or spread of INNS.

## Surveillance monitoring and reporting

This section will detail the types of surveying, reporting and record keeping required for INNS and list the persons responsible for carrying these out. A plan review schedule will also be detailed to help ensure the INNSMP stays up to date and relevant, and to help identify the need for any further studies or actions.

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## A5. Waste Management Plan

The Waste Management Plan (WMP) will cover all waste generated from the offshore Project during all stages of the offshore Project including details of contingency planning in the event of accidental release of materials. Where possible the hierarchy of reduce, reuse, recycle should be used. Contractors and Subcontractors are likely to produce their own WMP which will be provided to the Developer. Any WMPs will be provided to the Developer for approval prior to commencement of any activities and will be updated prior to the commencement of those activities. The WMP will be drafted post-consent but will include sections similar to the following.

### Overview and objectives

This section will provide background to the offshore Project and the WMP, details of all relevant UK guidance and legal requirements around the management of waste, and any specific waste management objectives of the offshore Project. It will also provide an overview of the scope and structure of the WMP.

### Types of waste

This section will provide the legal definitions for the types of waste likely to be produced. It will also include the waste hierarchy principles, shown in Figure A5-1 below, that will be implemented throughout the offshore Project.

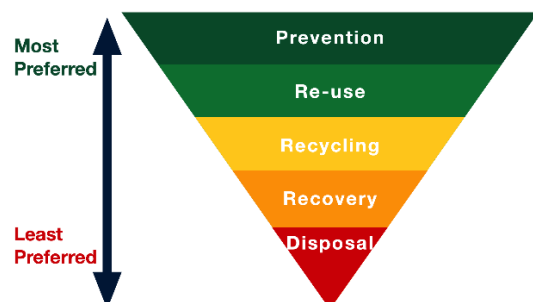


Figure A5-1 Waste Hierarchy

### Roles and responsibilities

This section will describe the roles and responsibilities relating to the implementation of the WMP. Some of the key responsibilities of the Contractors and Subcontractors addressed in the WMP will include:

- Complying with all relevant legislative and Offshore EIA Report requirements and ascertaining any relevant permits or licences;
- Strategies to increase awareness of recycling and waste reduction through education a plan distribution;
- Details of how waste will be handled, sorted and stored; and
- Agreeing with the principles of the Basel Convention of 1989 to avoid hazardous waste being unfairly exported to developing countries.

### Storage and handling of waste

This section will detail the proposed methods of storing and handling the various types of waste produced by the offshore Project, including how it will be segregated, how waste containers will be handled to ensure no waste runoff, and how it will be transported off site.

### Treatment and fate of wastes

This section includes Table A5-1 Types of waste and their likely fates detailing the waste types that might be produced during normal construction and their likely fates.

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**Table A5-1 Types of waste and their likely fates**

Type of waste	Source of waste	Fate of waste
[to be completed post-consent]		

All waste generated offshore will be taken to shore and appropriately disposed of in line with current guidance.

## Monitoring and incident reporting

This section will detail the records that will need to be kept for the management of waste, how they will be audited and the reporting procedures for any non-conformances or incidents.

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## A6. Written Scheme of Investigation (WSI) and Protocol for Archaeological Discoveries (PAD)

This document will be drafted post-consent and will detail the measures in place for protecting known archaeological sites and the protocols relating to the reporting of new archaeological discoveries that might be made during the pre-construction, construction and operation and maintenance stages of the offshore Project. It will be informed by consultation with relevant stakeholders and any surveys carried out across the site.

The Written Scheme of Investigation (WSI) will identify all known and potentially present archaeological assets within the offshore Project area and detail the investigations and analysis of results that arise from the pre-construction surveys in order to determine the importance and potential risks to the archaeological assets. It will also detail the mitigation and monitoring measures to be implemented in order to protect these assets.

The Protocol for Archaeological discoveries (PAD) sets out what must be done upon discovering any unexpected or incidental finds relating to the historic environment that may be encountered within the marine environment during construction, operation and maintenance of the offshore Project. It will follow the format detailed in the 'Protocols for Archaeological discoveries: Round 3 Offshore Renewables Project' (The Crown Estate and Wessex Archaeology, 2014). The types of findings likely to be included are any fossilised remains from periods of human inhabitation, but not fossils that are exclusively pre-human in origin. It will not include finds of geological, ecological, or other non-archaeological origin, unless a link to human activity can be assumed.

All contactors and sub-contractors must comply with the WSI and PAD. The WSI and PAD will be drafted post-consent but will include sections similar to the following.

### Introduction

This section will provide a background to the offshore Project and the WSI and PAD, detail all relevant UK guidance and legislative requirements related to managing impacts on archaeological assets and outline any linkages with other consent plans. It will also provide a summary of key consultations that have been carried out, and how they have been considered when drafting the WSI and PAD.

### Roles and responsibilities

This section will describe the roles and responsibilities relating to the WSI and PAD. The roles likely to be included are listed in Table A6-1 WSI and PAD roles and responsibilities.

**Table A6-1 WSI and PAD roles and responsibilities**

Role	Contact details	Responsibility
The Developer	[to be included post-consent]	Ensuring the implementation of the WSI and PAD and submitting archaeological method statements and reports.
Retained Archaeologist	[to be included post-consent]	Maintaining, reviewing and updating the WSI as required, ensuring the scope of work specifications meet the archaeological requirements, implementing and monitoring the PAD and advising in the event of an archaeological discovery
Contractors and Sub-contractors	[to be included post-consent]	Ensuring they are familiarised with the generic requirements of the WSI,

Role	Contact details	Responsibility
		respect any legal obligations, constraint maps and Archaeological Exclusion Zones (AEZs), implement the PAD and work with the archaeologist employed by the Developer.
HSE Lead	[to be included post-consent]	Ensure safe working conditions when any fieldwork in relation to archaeological mitigations is carried out.
ECoW	[to be included post-consent]	Providing advice to the Developer, through reviews of draft consent plans and monitoring compliance with the EMP and any consent conditions.

## Baseline

This section will detail a baseline review of any known and potential archaeological assets within the main archaeological study area of the offshore Project.

## Written Scheme of Investigation (WSI)

The section will cover the methodologies and findings of the pre-construction surveys, the key potential impacts to archaeological assets and the mitigations that will be put in place in order to protect these. It will follow the guidance set out in the 'Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects' (Crown Estate, 2021).

### Study area

This section will outline the study area for the WSI.

### Methods statements

This section will detail the requirement for method statements to be produced by the Retained Archaeologist for further archaeological works. These methods statements will be in accordance with the Crown Estate (2021) guidance.

### Pre-construction surveys

This section will detail the types of pre-construction surveys being carried out, the role of the Retained Archaeologist during the surveys and the findings of the surveys once they are complete.

### Mitigations

This section will detail the mitigation measures in place under various circumstances to minimise the impacts on known and potential archaeological assets, including the measures outlined within the Offshore EIA Report. This will include mitigations such as any Archaeological Exclusion Zones (AEZs) or temporary AEZs (TAEZs) used to preserve in situ any features or deposits of archaeological interest. These AEZs would apply to any activities that may disturb the seabed during construction. Strategies for establishing, monitoring and altering AEZs will also be detailed.

## Protocol for Archaeological Discoveries (PAD)

This section will cover the protocol for any unexpected archaeological discoveries made during construction, awareness training for the Developer, Contractors and Subcontractors and any reports required under the relevant Chartered Institute for Archaeologists Standards and Guidance.

## Monitoring

This section will detail the level of monitoring needed and the types of archaeological reports required to be produced during all stages of the offshore project.



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## References

The Crown Estate and Wessex Archaeology (2014). Protocol for Archaeological Discoveries. Offshore Renewables Projects. The Crown Estate.

The Crown Estate (2021). Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects. The Crown Estate

## Appendices

Appendices likely to be included are detailed descriptions as to the location of all high potential archaeological anomalies and a discoveries record form.

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## A7. Dropped Objects Form

