Construction Stage Environmental Management Plan

Iona Breakwater, Slipways and Public Toilet Block Project

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1 Construction Stage Environmental Management Plan (CSEMP) Introduction

This CSEMP has been specifically tailored for the Iona Breakwater, Slipways and Public Toilet Block Project. The project involves the construction of a new breakwater, repairs to existing slipways, and replacement of a public toilet block at Iona Harbour, Isle of Iona, Scotland. This project is being undertaken by Foyle & Marine Dredging Ltd. for Argyll and Bute Council. Given the sensitive marine environment and the importance of the ferry service to the local community, this CSEMP places particular emphasis on minimising disruption to ferry operations and protecting the surrounding ecosystem, especially the seagrass habitats.

1.1 Scope of CSEMP

This document has been prepared by Foyle & Marine Dredging Ltd. for contract and represents the Plan for management of aspects and impacts from activities that pose possible threats to the environment throughout the course of the project.

For the Iona Breakwater project, this CSEMP also encompasses:

- Management of dredging activities and disposal of dredged material at the authorised sea deposit area MA035
- Implementation and monitoring of the Seagrass Mitigation and Monitoring Plan (SMMP)
- Coordination with ferry operations to minimise disruption and environmental impacts
- Specific measures to protect the sensitive marine environment surrounding Iona

This Construction Stage Environmental Management Plan (CSEMP) recognises concerns regarding profitability and managing environmental impacts. By integrating both motives, it provides a workable framework to achieve an effective Environmental Management System.

This CSEMP will be made available to all Foyle & Marine Dredging Ltd. employees and to the future appointed contractors and operatives involved in the project on site works.

For the Iona Breakwater project, this CSEMP also encompasses the management of dredging activities, marine construction works, and the specific environmental considerations related to working in a remote island location with limited resources.

1.1.1 CSEMP Purpose

This CSEMP details the environmental management and mitigation measures which will be implemented during the construction phase of the project with the primary objective of reducing any associated adverse environmental impacts and meeting regulatory requirements. This CSEMP provides a framework for actions, responsibilities, and protocols associated with environmental management which Foyle & Marine Dredging Ltd. is required to deliver at all times.

The mitigation and management measures detailed in this CSEMP are required as a minimum to meet the requirements of Foyle & Marine Dredging Ltd.'s Environmental Management System.

1.1.2 CSEMP Objectives

This CSEMP sets out in detail the approach which Foyle & Marine Dredging Ltd. will adopt in dealing with the potential environmental impacts from various different construction activities throughout the construction of the Contracts. It provides systematic procedures for minimising environmental impacts from that may arise from the construction work.

The main objectives of the EMP are to:

- Refer to statutory environmental requirements and obligations;
- Clarify responsibilities of various parties involved;
- Address all potential significant environmental impacts;
- Set out environmental management approach;
- Initiate and implement mitigation measures;
- Set out housekeeping practices;
- Set out emergency procedures;
- Ensure compliance with the Marine (Scotland) Act 2010 and the specific requirements of the marine licence MS-00010433;
- Implement and monitor the Seagrass Mitigation and Monitoring Plan (SMMP) as required by the marine licence; and
- Manage the environmental impacts of dredging and disposal activities, adhering to the authorised sea deposit area MA035.

2 Document Control

An electronic copy of the CSEMP will be maintained and updated, as required, to reflect any changes in circumstances including changes in the construction phase.

It is the Project Manager's responsibility to ensure the personnel are aware of the location of the most recent version of this document.

Given the unique challenges of the Iona Breakwater project, including its remote location and sensitive environment, any updates to this CSEMP will be promptly communicated to all relevant parties as required by the project specifications.

3 Plan Review

This CSEMP is a live document and will be reviewed and updated where necessary to reflect the Plan of Construction, relevant legislation and policy, and any recommendations arising from site inspections, audits, meetings, or non-conformances.

Triggers for CSEMP review include:

- Identification of new environmental risks;
- Changes in legislation and best practice environmental management standards; and
- Changes in the approach and methodology (including changes as a result of the construction process).

Any revisions to the CSEMP will be approved by the Project Manager. In addition, all construction staff will be informed of any important changes to the CSEMP during Toolbox Sessions. A hard copy of the CSEMP will be kept onsite at all times and at the Project Manager's Office, where it can be viewed upon request.
A record of review/updates to the CSEMP will be maintained for audit purposes.

The document control of the CSEMP will be carried out in accordance with the administration and document procedure as outlined in the Operation Management Plan (OMP).

4 Promoting Environmental Awareness

Briefing and instruction will be given to Site Staff as well as Subcontractors to increase awareness and draw attention to environmental management issues.

Table 1 shows the outline of training requirements for all relevant staff. An outline of the training requirements will also be distributed to relevant site staff, subcontractors, etc. (Foyle & Marine Dredging Ltd. Training Policy). The details of training procedure are given in:

Table 1 – An Outline of Training Requirement for all Relevant Staff

Staff	Training Needs	Schedule/Frequency
Project Manager	Distribution of Environmental Management Plan.	Beginning of work.
Relevant Site Supervisors or Foremen Identified by Project Manager	Mitigation and management measures specific to their scope of work.	Before the Staff commences the particular work.
All Site Worker *(including Subcontractor Site Staff)*	General environmental management instructions or procedures, including site housekeeping, waste reduction, noise control, dust control, HSEQ management policy, targets, measures for Subcontractor performance, chemicals, etc.	Induction for the workers.

For the Iona Breakwater project, additional in-house training will be provided on:

- Seagrass habitat protection and the implementation of the SMMP;
- Marine mammal and bird observation and protection protocols;
- Biosecurity measures to prevent the introduction of invasive species;
- Waste management and pollution prevention specific to marine environments; and
- Cultural and environmental sensitivity training relevant to working on Iona.

In general, the training sessions will be conducted by the Project Manager on a regular basis or where it is deemed necessary.

5 Reporting and Communication Procedures

Effective two-way communications will be developed to initiate the flow of environmental information among different parties. The communication is mainly achieved through the site environmental site meeting, environmental briefing, site inspection, and environmental awareness promotion activities between Foyle & Marine Dredging Ltd., Site Workers, and Subcontractors. The major channels of communications are summarised in Table 2.

Table 2 – Summary of Communication Means & Actions

Means	Frequency	Purpose/ Action	Responsible Personnel
Site Meeting	Monthly	Face-to-face communications between construction and client.	PM
Environmental Briefing/Training Session	Monthly	Briefing or Training on environmental issues to key site staff and staff of subcontractors.	SEO
Environmental Complaint Log	When Necessary	To handle and respond environmental complaints.	PM
Site Inspection	Weekly	Promote awareness of environmental procedures among workers and sub-contractors via continual and casual conversations.	PM/SM
	Monthly		SEO

For the Iona Breakwater project, additional communication channels will include:

- Community liaison meetings with Iona residents and businesses to address concerns and provide project updates; and
- Direct communication line with the Licensing Authority for immediate reporting of any incidents or non-conformances related to the marine licence conditions.

6 Monitoring, Reporting, and Performance Review

6.1 Environmental Audit Program

The Audit Program for **Argyll and Bute Council** will be undertaken as follows:

- Six (6) Monthly Internal Audits for compliance against this CSEMP and the EMS. They will include an Audit of the site and Subcontractor activities to assess compliance with the CSEMP and relevant approvals, licences, and permits obtained.
- Regular internal audits will be conducted to ensure compliance with the marine licence conditions and the SMMP.
- Incident reports will be prepared following any onsite environmental incidents. This report will document the investigations undertaken and detail possible contributory factors and recommended system improvements.

6.2 Environmental Inspections

In addition to formal auditing and monitoring identified in this CSEMP, the following environmental inspections will be undertaken:

- Site Supervisory Personnel will conduct daily site inspections, noting any environmental issues in the Site Diary and reporting to the Environment Manager (or Delegate). .
- The Site Supervisory Personnel will, as part of their weekly inspections, inspect the site (including all Subcontractor activities) and issues arising will be noted in the Site Diary and communicated to the Environment Manager (or Delegate).
- The Environment Manager (or Delegate) will conduct an inspection of the site on a monthly basis.
- Recommendations (and any non-conformances) raised in previous inspections will be re-inspected for closeout or ongoing monitoring.

The Environment Inspection Checklist will include inspection of site activities and features as required by the project specifications and regulatory requirements.

6.3 Audit and Inspection Schedule

The Audit/Inspection schedule during the construction phase of Argyll and Bute Council:

Table 3 – Essential Construction Phase Audit/Inspection Schedule

Frequency	Details
Daily	Site Supervisory Personnel to visually inspect site and activities.
Weekly	Site Manager to conduct formal site inspection.
Monthly	Environmental Site Officer to conduct and record site inspections.
Semi-Annually	Comprehensive audit of site activities, CSEMP compliance, and relevant approvals/licences.

6.4 Non-Conformances and Corrective Action

All non-conformances will be investigated and recorded in a Non-Conformance Register (NCR) Form. A summary of all non-conformances will be provided to the Project Manager on a monthly basis.

The Project Manager is responsible for addressing non-conformances and ensuring that corrective actions are implemented. The Project Manager will address non-conformances, which outlines the procedure for addressing non-conformances and the activities to be undertaken in relation to corrective actions.

All non-conformances and corrective actions (separate to those identified in periodic inspections) should be reported immediately to the Environment Manager (or Delegate) and recorded in a Non-Conformance Register (NCR).

It is the responsibility of the Project Manager to immediately initiate corrective actions, if required.

The occurrence of such an event will be brought to the attention of personnel responsible and environmental controls will be updated to prevent a reoccurrence. The issues, corrective, and preventative actions proposed and the responsibilities and timing for completion of the actions will be detailed in the Non-Conformance Register (NCR).

7 List of Legal and Other Requirements

Table 5 – List of Legal and Other Requirements

Title of Requirement	Relevance to the Project
Marine (Scotland) Act 2010	This is the primary legislation governing marine activities in Scottish waters. It provides the framework for marine planning, licensing, and conservation.
Marine Licence MS-00010433	This is the specific licence issued for the project, authorising dredging and deposit activities. It contains detailed conditions that must be adhered to throughout the project.
Seagrass Mitigation and Monitoring Plan (SMMP)	This is a required plan that must be developed and implemented to protect and monitor seagrass habitats in the project area.
Iona Harbour regulations and bylaws	These local regulations will govern activities within the harbour area and must be complied with during construction.

7.1 Legal Requirements Controls

PM and EM should ensure that all legal requirements are under control.

7.2 Environmental Legislation

Table 6 – Environmental Legislation

Title of Legislation/Regulation	Relevance to the Project
Water Resources Act 1991	Provisions for the prevention of water pollution, including requirements for consent to discharge into waterways.
Environmental Protection Act 1990	Establishes a framework for preventing pollution and managing waste, including controls over harmful substances entering water bodies.
Marine and Coastal Access Act 2009	Regulates activities affecting marine environments, including licensing for works in coastal waters and provisions for the protection of marine biodiversity.
Waste Management Licensing Regulations 1994	Ensures that waste is managed properly, preventing illegal disposal and ensuring that harmful substances do not enter water bodies.
Environmental Noise (England) Regulations 2006	Provides a framework for managing environmental noise, including requirements for assessing and mitigating noise impacts from construction activities.
Control of Pollution Act 1974	Addresses pollution control measures, including those related to water quality and noise pollution from construction activities.
Health and Safety at Work Act 1974	Ensures the health and safety of workers and others affected by work activities, including environmental health considerations.
The Conservation (Natural Habitats, &c.) Regulations 1994	Implements EU directives on the conservation of natural habitats and wild fauna and flora, protecting sensitive ecological areas during construction activities.
Air Quality Standards Regulations 2010	Sets limits for air emissions from construction site activities to ensure compliance with air quality standards.

8 Particular Environmental Aspects

8.1 Environmental Aspects Register

PM and EM shall ensure that all environmental aspects that may pose significant impacts to the environment are under control. A list of environmental aspects of this project can be referred to Foyle & Marine Dredging Ltd. Risk Control Measures Policy.

Iona Breakwater Specific Environmental Aspects:

- Dredging and disposal of dredged material;
- Marine construction activities (breakwater construction, slipway repairs);
- Potential impacts on seagrass habitats;
- Vessel movements and associated risks (e.g., oil spills, collision with marine life);
- Noise and vibration impact on marine fauna;
- Temporary disruption to ferry services and local marine traffic; and
- Management of construction materials and waste on a remote island location.
- Dredging and disposal of dredged material
- Marine construction activities (breakwater construction, slipway repairs)
- Potential impacts on seagrass habitats
- Vessel movements and associated risks (e.g., oil spills, collision with marine life)
- Noise and vibration impact on marine fauna
- Temporary disruption to ferry services and local marine traffic
- Management of construction materials and waste on a remote island location

8.2 Environmental Impacts

Where the work activities impact on the environment the effects of these activities shall be considered in respect to the site and its locality so that any adverse effects may be identified, evaluated, and actioned.

Any significant activities which may impact on the site and locality particularly in terms of:

- Resources Utilisation (including use of raw materials, energy, etc);
- Waste Management;
- Air Emissions;
- Water Pollution;
- Noise and Vibration Nuisance;
- Indirect impacts caused by Foyle & Marine Dredging Ltd.'s Contractors or customers; and
- Others: *Flora and Fauna, Visual Impact, Community Impact, Transportation Impact, Nuisance, Site Security, etc.*

The following is an un-exhaustive list of environmental impacts, sensitive receptors, and controls that could be implemented on site.

8.3 Traffic and Navigation Management

This Construction Stage Environmental Management Plan (CSEMP) incorporates a comprehensive Traffic and Navigation Management Plan (TNMP) in accordance with Condition 3.2.5 of the construction licence and Condition 3.2.4 of the dredging licence. The TNMP is a crucial component of the project, addressing the following key aspects of marine operations and safety:

- Arrangements for the compound situated below the Mean High-Water Springs (MHWS), ensuring proper management of this critical area where land and sea activities intersect.
- Procedures for barge transshipment, a vital operation in the construction process that requires careful coordination to minimise environmental impact and maintain efficiency.
- Vessel navigation routes and associated risk assessments, which have been meticulously planned to ensure safe passage of project vessels while minimising disruption to local marine traffic.
- Clear communication protocols with local marine users, including ferry operators, fishing vessels, and recreational craft. This proactive approach to communication is essential for maintaining safety and reducing the risk of incidents in the busy waters around Iona.
- Emergency procedures outlining response strategies for various scenarios that could occur during marine operations. These procedures have been developed in consultation with local emergency services and maritime authorities to ensure a coordinated and effective response to any incidents.

The full Traffic and Navigation Management Plan is appended to this CSEMP as **Appendix A**, providing detailed information on all aspects of marine traffic management for the project.

8.4 Method Statements

Detailed method statements for specific construction activities will be provided separately to the Licensing Authority prior to the commencement of each activity. These method statements will outline step-by-step procedures, risk assessments, and mitigation measures for individual tasks within the project scope.

9 Ecologically Sensitive Areas

Foyle & Marine Dredging Ltd. will recognise the importance of the district by way of this project as a busy industrial and residential area to be protected and undertakes to foster and promote good relations with all stakeholders.

As the site is located near several watercourses, the following UK legislation shall be complied with:

- **Water Resources Act 1991:** Provisions for the prevention of water pollution, including requirements for consent to discharge into waterways.
- **Environmental Protection Act 1990:** Establishes a framework for preventing pollution and managing waste, including controls over harmful substances entering water bodies.
- **Marine and Coastal Access Act 2009:** Regulates activities affecting marine environments, including licensing for works in coastal waters and provisions for the protection of marine biodiversity.
- **Waste Management Licensing Regulations 1994:** Ensures that waste is managed properly, preventing illegal disposal and ensuring that harmful substances do not enter water bodies.
- **Control of Pollution Act 1974**: Addresses pollution control measures, including those related to water quality and noise pollution from construction activities.
- **Health and Safety at Work Act 1974:** Ensures the health and safety of workers and others affected by work activities, including environmental health considerations.

No pollutants should be discharged into any of the aforementioned watercourses.

9.1 Fisheries

Not applicable.

9.2 Tidal Information

Not applicable.

10 Incident Management and Emergency Response

10.1 Introduction

An Environmental Incident is an unplanned event which occurs onsite and has the potential to result in adverse environmental impacts onsite and/or in the surrounding area *(e.g. a chemical spill)*. The general emergency response procedure for an environmental incident is to:

- Ensure site safety and move people from the immediate area;
- Warn traffic/pedestrians in the immediate area of any hazard which impacts traffic and access (use lights and/or warning signs where possible);
- Take any practical steps to contain the hazard and prevent it from spreading; and
- Notify relevant authorities (if necessary).

Incidents onsite that are likely to result in pollution will be reported immediately to the Project Manager. Where required by legislation, *(e.g. where an incident has the potential to result in off-site environmental harm)*, the council will notify the EPA and meet with the notifying party as soon as practicable following an incident in order to commence investigations and make recommendations.

Any spills or accidents, and details of the corrective actions undertaken will be documented.

10.2 Emergency Response

Emergency Response is required when an unplanned incident occurs which has the potential to have a detrimental impact on the environment. These incidents can include chemical spills, disturbance of acid sulphate soils, damage to heritage values, and injury to fauna. Any minor incidents which can be contained on the site and removed within twenty-four (24) hours do not require an emergency response. A site-specific Emergency Response Plan will be developed by the Project Manager prior to construction.

The Emergency Response Plan should include the following:

- Site Layout and Fire Protection Drawing;
- Dangerous Goods Locations;
- Emergency Contact List (Including After-Hours Emergency Contacts); and
- Evacuation System

Any incidents requiring emergency response should be immediately reported to the Project Manager. Following an emergency procedure, the Project Manager will review the success of existing emergency procedures and amend or provide additional training if necessary.

The standard emergency response procedure is as follows:

- Clear the immediate area of any personnel;
- Notify pedestrians and traffic if the incident has the potential to adversely impact traffic and access;
- Prevent spread of the hazard; and
- Notify relevant authorities.

10.3 Emergency Contacts

For emergencies on Iona, contact:

- **Mull and Iona Community Hospital**:
  - Address: Craignure, Isle of Mull, Argyll and Bute, PA65 6BG
  - Phone: 01680 300392
- Local Emergency Services:
  - **Fire and Rescue Service**: 01681 700730 (Iona Fire Brigade)
  - **Police Scotland**: 101 (Non-Emergency)
  - For immediate emergencies, always dial 999.

When contacting an authority in relation to an emergency, the following information should be included:

- Your Name, Role, and Contact Information;
- Type of Incident and Any Injuries;
- Emergency Services Required or Already Requested;
- Available Access Points at The Site; and
- Actions Already Undertaken to Minimise Hazard.

11 Enquiries and Complaints

All complaints and enquiries will be managed and a complaint book will be available on site. All media enquiries are to be directed to the Environmental Director.

APPENDIX A: FMD-MTMP-001 - Iona Breakwater - Marine Traffic Management Plan