Orkney Logistics Base (Hatston)
Outline Construction Environmental Management Document

June 2024

CONTROL SHEET

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1 CHANGE CONTROL

It should be noted that this is a working draft, live, document, for use by bidders and for consenting purposes. Note this document will develop as the project progresses and more information on construction methods and mitigation emerge.

Any changes to working methods not identified within the method statement (i.e., construction technique, quantity of material to be imported or other significant change to methodology or circumstances) will involve cessation of the works until a full risk assessment has been conducted on these changes and the method statement has been altered accordingly to reflect these changes. Any changes will be accepted by all parties (including consenting bodies if required). A record of the change(s) will be issued to all parties concerned.

Recording of change(s) will identify areas where change(s) have occurred throughout the document.

Table 1-1: Document Change Record

Date	Version	Author	Change Details

2 OVERVIEW

2.1 Introduction

This document represents the Construction Environmental Management (CEM) Document which will form the main document outlining environmental protocols relating to the expanding of the existing Hatston Quay and adjacent land to create a Logistics Base to be rebranded as Orkney Logistics Base (Hatston). Although this document has been produced by EnviroCentre, EnviroCentre do not accept any responsibility for the contents of assessments, plans or construction procedures that are carried out or added by other parties. This document is considered to be 'Live' and will be populated by the Contractor as the works progress.

The purpose of this outline CEM Document is to guide Orkney Islands Council Harbour Authority (OICHA) and their contractors during the construction phase of the Orkney Logistics Base (Hatston) project, to ensure that the commitments to mitigation, management and monitoring that are presented in the Environmental Impact Assessment Report (EIAR) are applied. It would not be practical or achievable to produce a fully detailed CEM Document at this stage. The aim of the document, therefore, is to provide a framework that can be followed to develop a detailed CEM Document once a contractor has been appointed and the specific project design elements are known.

During the construction process the contractor will liaise with Cooke Aquaculture Scotland Ltd to advise when potentially sensitive works that may affect them are programmed to be undertaken.

During the construction works the contractor will ensure unearthed archaeological artefacts are recorded and reported to the appropriate regulatory body.

OICHA will contact UK Hydrographic Office to mark the site of the Grumman Wildcat JV526 as an obstruction / wreck on all marine charts, therefore mariners will understand not to approach or anchor at the site.

A specialist blasting contractor will be employed to undertake underwater blasting as required. The specialist blasting contractor will operates under a highly regulated process and will be responsible for all aspects of Health & Safety and environmental considerations. A suitably qualified Ecological Clerk of Works (ECoW) will be present in advance of blasting during specific periods when qualifying features of the SPA are likely to be present. Ahead of blasting a warning siren (or other) will be sounded to warn individuals to vacate the area, and this will also act as a mechanism to remove fauna from both the working and adjoining areas.

2.2 Construction Environmental Management Document

The CEM Document has been produced in accordance with The Highland Council Guidance Note on Construction Environmental Management Process for Large Scale Projects (August 2010). This Guidance Note sets out a robust Project Environmental Management Process (PEMP) for large scale projects. It describes the CEM Document as one of the key management tools for highlighting site sensitivities along with appropriate mitigation measures identified through various environmental studies as well as incorporating other requirements from consents and licences. It also provides a clear roadmap of the key roles and responsibilities of Orkney Islands Council Harbour Authority (OICHA) and the Contractor during construction works.

2.3 Schedule of Mitigation

A Schedule of Mitigation (SM) brings together all the identified mitigation measures to avoid or minimise the environmental effects of the development. It sets out in broad terms how mitigation can be appropriately managed and implemented during construction. The SM is based on general good management practises along with the measures identified through site specific environmental studies.

The measures identified in the SM are not exhaustive and appropriate mitigation shall be identified as required by the Contractor to ensure the environment is protected.

The Orkney Logistics Base (Hatston) SM is provided within Section 6 of this document.

2.4 Construction Environmental Management Plans

As noted above, the CEM Document is the overarching document which highlights the arrangements for environmental management at a high level.

The information and procedures provided in this CEM Document shall be used to develop detailed CEM Plans for each specific construction phase. These CEM Plans shall provide focused mitigation and control measures relevant to the specific construction activity in order to ensure the environment is protected during the construction works. The CEM Plans shall incorporate, but not be limited to, the identified mitigation measures detailed within the SM. If the proposed construction works are within or have a significant likelihood of impacting on sensitive areas, the CEM Plan's shall be submitted to the relevant Regulatory Authority (i.e. Orkney Islands Council (OIC) and / or Marine Directorate-Licensing Operations Team (MD-LOT) for approval prior to works commencing.

The CEM Plan's are working documents which shall be regularly reviewed and updated throughout the lifetime of the individual construction projects in accordance with the procedures detailed in this document and the relevant consents.

With reference to IEMA Guidance "Delivering Quality Development" a CEM Plan '…*should act as a 'live' document allowing it to be updated as new information/details of how mitigation will be achieved.*[1]

As an outline CEM Document, it is considered that the following CEM Plans will be prepared once a contractor has been appointed (note, this is not an exhaustive list and is subject to change):

- Site Waste Management Plan (SWMP);
- Vessel Management Plan;
- Piling Management Plan;
- Construction Noise Management Plan;
- Construction Dust Management Plan;
- Marine Mammal Management Plan;
- Bird Management Plan;
- Non-native Invasive Species Plan;
- Water Quality Management Plan (including real time turbidity measurement and action levels);
- Archaeology Management Plan;
- Dredging Management Plan;
- Pollution Incident Response Plan.

[1] https://www.iema.net/download-document/328273

3 PROJECT OVERVIEW

3.1 Introduction

The economy of Orkney is shaped by the marine environment and maritime activities taking place around the archipelago's coasts and harbours. There are many vessel movements within the Orkney archipelago each year, as well as circa 8,000 vessels passing through the Pentland Firth, with cargoes in transit between Europe and North America.

Orkney Islands Council Harbour Authority (OICHA) proposes to expand the existing Hatston Quay and adjacent land to create a Logistics Base to be rebranded as Orkney Logistics Base (Hatston). Hatston Quay includes a ferry terminal and is located on the Orkney Mainland coast to the immediate northwest of Kirkwall. The proposed development forms part of the Orkney Harbours Masterplan.

The main purpose of this facility would reduce the current seasonal constraints on the availability of berths due to cruise activities and will provide a facility to attract more users across a range of economic sectors such as offshore wind, oil and gas, freight and ferries, boat repair, aquaculture and logistics. With the additional space and quay length current operations can co-exist with such new activities.

3.2 Site Description

The site of the proposed development is part of an existing ferry terminal, located approximately 2km northwest of the town of Kirkwall off the A965 Grainshore Road. The site is located on a section of coastline which has commercial / industrial uses located within adjacent grazing land.

There are a number of isolated residential properties located to the south south-west of the site with the closest residence approx. 750m away.

It is proposed to extend the existing outer quay by 300m (with minimum water depth of -10m CD) which would also form a 125m inner berth. This would create substantially more quayside which would be available for both current and future commercial operations.

In addition to the above, circa 7.5 hectares of additional land extending from the current shoreline outwards would be made available for harbour-related operations through reclamation. The design includes a ship lift, additional linkspan and fuel facility.

3.3 Environmental Setting

The surrounding area contains several designated sites, as illustrated within Drawing No 674795-GIS078, Appendix A.

The proposed works are outside of all the designated sites, with the exception of the North Orkney SPA, which overlaps with the site boundary which is designated for breeding and non-breeding birds.

The qualifying features include:

- Great Northern Diver (*Gavia immer*), non-breeding;
- Red-throated Diver (*Gavia stellata*), breeding;
- Slavonian Grebe (*Podiceps auritus*), non-breeding
- Velvet Scoter (*Melanitta fusca*), non-breeding.

3.4 Proposed Construction Works

The anticipated timetable for works is expected to be:

- Phase 1 tendered late in 2024 or early 2025 with the Phase 1 project starting on site in 2025 assuming planning and marine licences can be obtained. Phase 1 would be operational by 2026 with the aim of supporting the existing operations at Hatston, particularly the lifeline freight and passenger ferry services; and
- Phase 2 and Phase 3 would be expected to be undertaken from around 2027.

3.5 Construction Programme

The construction programme is to be agreed with OICHA Project Team and detailed within the project specific CEM Plan. The programme will be kept up to date as site work progresses or parameters change.

3.6 Construction Methods and Timings

Initial construction methods and timings are:

- Vibro piling (no impact piling) and blasting likely during period April to October in line with likely suitable weather windows. One blast per day usually end of shift.
- There is 6,700m^3 of dredging to be undertaken by long reach from land in Phase 2 and 3 of the development. This can be undertaken at any time and would take approx. 7 to 10 days maximum for each dredge campaign.
- Rock armour import would be two shipments at start and half way through contract. Piling would be imported through existing Orkney Northlink freight services. All other materials would be imported by similar manner if not on Isles.

With reference to construction vessels etc. and their movements, a Navigation Management Plan (NMP) will be developed once the contractor(s) are commissioned and vessel size(s) are known. The NMP will be attached to the CEM Plan once developed.

The proposed development is to infill the foreshore adjacent to the existing port. There will be no stockpiling of material as the infill will be brought to site directly from local quarries and tipped into place. This will avoid double handling (i.e. delivery to site, stockpiling and then moving to the infill area) and thereby avoids disturbance/damage to soils on undeveloped land.

The principal contractor will produce and implement a biosecurity plan throughout the duration of works. This will include the cleaning of equipment and plant machinery prior to deployment and at regular intervals throughout to reduce risk of transmitting non-native and invasive species. The plan will be submitted to the planning authority and other relevant consultees for approval prior to works commencing and implementation would be audited by the Environmental Clerk of Work (EnvCoW).

3.7 Hours of Working

With the exception of environmental management activity, in cases of emergency or unless agreed in writing with the Planning Authority, construction operations shall take place within the following hours;

- Monday to Saturday: 07:00 – 19:00; and

- Sunday: 07:00 – 14:00.

3.8 Security

The Principal Contractor shall establish a temporary construction compound which shall be segregated from the surrounding area. This temporary compound shall be managed / controlled by the Principal Contractor under the Construction, Design and Management Regulations 2015 (CDM).

The location of the temporary construction compound, the means of segregation and access routes are to be agreed with OICHA Project Team and detailed within the project specific CEM Plan. Suitable signage to direct construction workers and deliveries shall be installed prior to commencement of site works.

4 APPROACH TO ENVIRONMENTAL MANAGEMENT

4.1 CEM Document Implementation

The project is being tendered as a design and build contract. The CEM Document shall therefore be issued to potential contractors during the tender stage to allow environmental sensitivities and mitigation measures to be built into the plans at the design stage where possible.

Once the contract is awarded, detailed CEM Plans shall be developed by appropriate personnel within the Principal Contractors team taking into account the information provided within the CEM Document to ensure that construction works are undertaken in such a way as to minimise environmental impacts and ensure compliance with legislation and licenses.

As noted in Section 2.1, the CEM Plan is a live working document which shall be regularly reviewed and updated throughout the lifetime of the associated construction project.

4.2 Legislative Requirements

Considerable environmental legislation applies to the works to be undertaken. Prior to commencement of construction works, all relevant legislation, including requirements for licences, permits and / or consents, shall be identified and the appointed Contractor will be required to provide details of how compliance is to be achieved, as part of delivering the CEM Plan.

The appointed contractor will also adhere to best practice guidance including the following Guidance for Pollution Prevention (GPPs):

- GPP 1: Understanding your environmental responsibilities - good environmental practices;
- GPP2: Above ground oil storage tanks;
- GPP3: Use and design of oil separators in surface water drainage systems;
- GPP5: Works and maintenance in or near water;
- GPP6: Working at construction and demolition sites;
- GPP 8: Safe storage and disposal of used oils;
- GPP13 Vehicle washing and cleaning;
- GPP21: Pollution incident response planning; and
- GPP22: Dealing with spills.

4.3 OICHA and Contractor – Roles & Responsibilities

4.3.1 Philosophy

By defining responsibilities across all levels of the project management team a common goal can be sought, with individuals named to deliver all aspects of the CEM Document. Compliance with the CEM Document and supporting CEM Plans is mandatory and shall be adhered to by all personnel employed on the project to achieve a common approach to environmental control.

4.3.2 OICHA Client Team

During construction, as the named license holder, OICHA has responsibility for complying with the conditions which include delivering the commitments defined in the CEM Document.

The contractor shall act as the primary contact with all statutory bodies during construction.

The contractor shall regularly monitor works on-site and ensure that all conditions, committed mitigation and identified best practice are delivered in accordance with the CEM Document and project-specific CEM Plan.

The contractor has the authority to halt any activity where environmental commitments are not being successfully delivered, where legal requirements are being breached or where there is a significant risk to the environment.

The contractor shall report any environmental incidences to the relevant consenting body within 24 hours of being notified. All instances of suspected environmental crime shall be reported immediately to the Police.

OICHA, as the client, shall provide the name of a key person within their organisation, who shall liaise directly with the contractor and relay relevant information to OICHA's Client Team.

The OICHA's key person shall be supported by OICHA's consultant engineer and environmental consultant who shall act as third-party reviewers for OICHA with other parties inputting as required. This support shall include an Environmental Clerk of Works (EnvCoW) who shall audit the contractor's environmental compliance and report to the OICHA's Client Team.

OICHA EnvCoW
A suitably qualified Environmental Clerk of Works (EnvCoW) will be appointed to supervise the project as required.

The EnvCoW will conduct regular audits and will be on site when required to monitor specific tasks which have an associated ecological/environmental sensitivity. The EnvCoW will provide toolbox talks and induction material on request to promote good awareness of ecological/environmental constraints and best practices.

EnvCoW duties include, but are not limited to:

- Being the main point of contact should any issues relating to environmental queries/incidents arising during construction;
- Regular site audit to document compliance with this CEMP;
- Identifying potential environmental risks and developing environmental controls;
- To be familiar with environmental/ecological licensing processes and any licences which are in place to facilitate the development;
- Monitoring of site works where an environmental/ecological sensitivity is apparent;
- Direct liaison with the Contractor regarding known and unforeseen environmental/ecological constraints;
- Provision of advice to achieve good environmental performance;
- Provide site specific induction material/undertake toolbox talks/site induction briefings if this is required;
- Investigation and reporting of unplanned incidents (e.g., unexpected occurrence of protected species, pollution events, implications of delays due to adverse weather conditions etc.);
- Raise an alert for any non-compliance with the environmental/ecological protocols;

- Report findings to the Contractor/OICHA immediately. If insufficient action is taken, and environmental/ecological damage is a risk, then the EnvCoW has the authority to stop works;

As well as site observation reporting, the EnvCoW will produce a final report to OICHA summarising/documenting the environmental compliance of the construction period and any positive/negative effects noted on the environment. The evidence for effects will be based on findings detailed in the site observation reports and site meetings including in the minutes of any formal meetings. The report will be made available to the Contractor.

4.3.3 The Contractor

The Contractor will report on environmental activities and will be responsible for the following:

- Ensuring compliance with all relevant legislation;
- Ensuring best working practice and guidance for working including those contained in industry Code of Practice documents;
- Application of the environmental controls and mitigation measures contained in the CEM Plan;
- Maintaining environmental controls on site as fit for purpose;
- Prompt attendance and remediation of any negative environmental incident that may occur on site;
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to OICHA and the EnvCOW; and

Administering an environmental log, with a periodic (i.e., weekly) summary report to document compliance and required actions.

The contractor should provide reports as required to OICHA Project Team confirming the status of the project, implementation of environmental requirements, environmental audits, monitoring and any environmental incidents on a regular basis to be determined between the relevant parties.

The contractor shall develop a project specific CEM Plan which, if required, shall be submitted to the Regulatory Authorities for approval prior to works commencing on site. In this instance, site works shall not commence until the CEM Plan has been approved.

The contractor shall be responsible for all site staff (at all levels) adhering to any environmental policies or sensitivities and the requirements of the CEM Plan. The CEM Plan should therefore include details of how the contractor intends to ensure all staff employed in the execution of the works fully understand all environmental requirements and are properly equipped to implement these requirements.

The CEM Plan should also include the details of key individuals working on site, their job roles and contact details. The communication channels that should be followed by all site staff, including who has responsibility for informing other parties on site, and how to respond in the event of an environmental incident shall also be clarified in the document.

The contractor shall manage a mitigation, commitments and conditions tracking register to demonstrate environmental compliance during the construction project. This shall form an item during regular OICHA client team meetings.

Contract / Project Manager
The contractor shall identify a Contract / Project Manager within the CEM Plan who shall liaise / report directly to the OICHA client team. The Contract/Project Manager's specific environmental responsibilities include (but are not limited to):

- Demonstrate positive environmental leadership and commitment through actively supporting the initial set-up and sustaining effective environmental management and monitoring measures;
- Ensure adequate provision of competent resources, including the appointment of a suitable person (i.e. HSEQ Manager or similar) who shall be responsible for auditing the construction works on a daily basis, to ensure the requirements of the CEM Plan are met;
- Ensure all consents and licenses are in place prior to work commencing; and
- Report any environmental incidences or crime immediately to OICHA within 24 hours of the occurrence. All instances of suspected environmental crime will be reported immediately to OICHA.

Site Manager / Supervisor
The Site Manager / Supervisor's specific environmental responsibilities include (but not limited to):

- Work with the HSEQ Manager (or similar) to ensure the CEM Plan is implemented and updated as necessary;
- Delivery of toolbox talks for the education of construction personnel;
- Report to the Contract / Project Manager on a weekly basis details of:
    - Any non-compliance identified on site;
    - Monitoring information relating to the significant environmental aspects on site;
    - Preventative actions reports; and
    - External environmental communications reports; and
- Inform the Contract / Project Manager of any significant deviations from the agreed methods of working or environmental incidents/crimes as soon as practicably possible.

HSEQ Manager (or Similar) Responsibilities
The specific environmental responsibilities of the HSEQ Manager (or similar) are (but not limited to):

- Oversee the implementation and organisation of the CEM Plan on a day-to-day basis;
- Ensure general environmental good practice is followed across the entire project construction site at all times, by all personnel and have the authority to halt works if necessary;
- To ensure the construction works adhere to the Breeding Bird Protection Plan (Refer to Appendix B);
- Report any environmental non-compliances to the Site Manager / Supervisor and provide advice as required;
- Provide reports to the contractors team on the environmental status of the construction works including compliance;
- Delivery of toolbox talks, posters, information leaflets, video, digital or online applications for the education of construction personnel;
- To liaise with the Marine Mammal Observer (MMO) in the implementation of the Hatston Marine Mammal Protection Plan (MMPP) (Appendix C) during any construction works in the marine environment;
- Attendance at relevant Contractor meetings;
- The contractor's emergency contact for any environmental or ecological issues that arise on the construction site; and
- Report any emergencies or suspected environmental crime immediately to the Contract / Project Manager.

All Site Personnel
All personnel working on the project are responsible for the environmental control of their own work and shall perform their duties in accordance with the requirements of the CEM Plan. No deviations are permitted without the written authority of the Contract / Project Manager.

All site personnel shall (but not limited to):

- Implement control measures described within the CEM Plan; and
- 'Stop the job / activity' if there is potential for pollution occurring and notify the Site Manager / Supervisor.

4.4 Training & Awareness

All contractors and subcontractors shall be selected with due consideration of qualifications and experience.

Environmental training shall be undertaken to ensure all site personnel have the appropriate knowledge to successfully implement the Construction Method Statement (CMS), the CEM Plan and the environmental requirements of the project.

The training programme shall be developed by the contractor and form part of the construction project specific CEM Plan. As a minimum it is anticipated to include the following:

- All site personnel to attend a site induction prior to commencing work at the site. Key environmental considerations include waste management, working in or near watercourses, surface water pollution and control, ecology, dust management and noise management, emergency preparedness and responses should be included;
- Weekly sessions to cover specific relevant issues appropriate to the work being undertaken at the time;
- Any specific training requirements for key identified roles;
- Records of all training required and provided to all employees should be maintained and made available to OICHA for inspection;
- The use of Information posters and leaflets, video and digital or online applications should also be considered; and
- Commitment to undertake a toolbox talk in the event of an environmental incident or complaint.

4.5 Complaints & Enquiries

The formal procedure for handling project complaints/concerns shall be agreed between the Contractor and OICHA Client Team prior to works commencing. The contractor's CEM Plan shall detail the agreed procedure in the event a complaint is received.

4.6 Monitoring, Continual Improvement & Review

The Contractor shall ensure that the CEM Plan is reviewed regularly (and no less frequently than monthly) to ensure that:

- The objectives and requirements of the CEM Plan is still valid and are being met;
- Identify any negative impacts from construction activities;
- Assess the effectiveness of control measures;
- Identify if further controls/corrective action is required; and
- Forthcoming activities are reviewed and any necessary amendments to the CEM Plan are put in place before the relevant work begins.

4.7 Inspection & Audit

OICHA representatives shall conduct site inspections on a regular basis to confirm that processes are being carried out effectively. A written report of these inspections shall be disseminated to the relevant contractor management levels for review and action.

4.8 Non-conformance & Corrective Action

If criteria within the CEM Plan are not fulfilled and appropriate corrective action(s) is/are not taken a non-conformance may be raised by the Contractor or Client representatives. Examples of circumstances where this may arise include:

- Receipt of a complaint regarding pollution or other environmental impacts caused by the project;
- Departure from approved or agreed procedures; and
- Non-conformance identified as a consequence of any self-assessment, formal audit or other environmental survey or inspection.

The non-compliance will be notified to the Client representative as soon as practicably possible. Should it be identified that there is potential for mitigation measures or legislation to be breached the work or activity shall stop immediately. Work shall only recommence once measures are implemented to ensure the situation is remedied.

Following notification, a non-conformance/corrective action report shall be issued to the Contractor by the Client representative. It is the responsibility of the Contractor to immediately initiate corrective actions (if not already done so) and, once completed, provide details of the actions undertaken on the non-conformance/corrective action report and return it signed to the Client's representative within an agreed timeframe. If the non-conformance is considered to breach legislative requirements, the breach should be reported to the appropriate public body.

Corrective action may include changes to work instructions, alterations to the CMS, further staff training etc. Non-conformances should be reviewed by the appropriate Client representative and form part of construction meeting agendas.

4.9 Significant Incident Reporting Procedures

In the event of a potential harmful or polluting incident, spillage or discharge, the actions listed below shall be followed to notify the appropriate organisations of the occurrence:

- Should an incident occur, the Contract / Project Manager shall inform the Client representative of the occurrence of an incident at the site as soon as practicably possible following awareness of the incident;
- The Contract / Project Manager shall notify the Client representative in writing the next working day after the incident, detailing the time and nature of the incident; and
- The Contract / Project Manager shall investigate the incident and notify the Client representative of the outcome of the investigation and any mitigation measures required as soon as practicably possible. The outcome of the investigation shall be reported to the client representative within 3 days of reporting the incident.
- The Contract / Project Manager will notify the Regulator(s) in writing the next working day after the incident, detailing the time nature of the incident; and
- The Contract / Project Manager will investigate the incident and notify the Regulator(s) of the outcome within 14 days of the incident.

4.10 Control of Records

Environmental records, including waste management records, shall be maintained in accordance with the respective company procedures and legal requirements. The records shall be maintained, in either hard copy or electronic format, as required by the individual procedure that the records relate to, in such a way that they are readily identifiable, retrievable and protected against damage, deterioration or loss. The individual procedure that the records relate to also specifies the retention time for the records and who has the authority to dispose of them.

4.11 Change Control Processes

Where any amendments and variations to the project-specific CEM Plan are required, either as a result of changes to construction methods, design or mitigation the method of recording the change shall be agreed between the Contractor and OICHA and documented in the Contractor's CEM Plan. Significant changes with be agreed with the relevant consenting body.

5 POLLUTION PREVENTION AND EMERGENCY RESPONSE

5.1 General Arrangements

The main priority is to avoid spillages and emergencies. This will be achieved by minimising the risk of spillage at source by avoiding the use of polluting materials where possible. Where the use of polluting materials is unavoidable, then suitable containment in a sensible location is essential.

5.1.1 Responsibilities

All persons working for or on behalf of OICHA have responsibilities to ensure they are aware or have been made aware of the processes and equipment in place to deal with emergency incidents.

Environmental factors will be taken into account at all stages of the project and personnel will be experienced and trained in the installation of environmental mitigation and the proper use of spill kits. By providing site-specific induction, toolbox talks, onsite training, and running spill drills the risk of an emergency on site will be minimised (controlled) as far as reasonably practical.

In the event of an environmental incident, the project team will be guided to “stop what you are doing, contain, notify / and report it to your supervisor.

5.2 General Incidents

5.2.1 Emergency Procedures

Emergency procedures in the event of fire, accident, contact with live services, dangerous occurrence or a significant environmental incident will be displayed throughout the site facilities.

Where an environmental incident occurs, competent personnel should firstly assess and where appropriate, deal with the incident. Where the nature or scale of the environmental incident is outside the capability of the competent person/s they shall notify without delay, OICHA who will contact an appropriate environmental incident containment organisation to deal with the incident and mitigate any impact to the environment.

All persons working for or on behalf of OICHA have a responsibility to report the occurrence of any environmental incident regardless of magnitude to their superior.

The Contractor has the responsibility to ensure environmental incidents are reported through the appropriate incident review process and where applicable oversee the implementation of improvement actions, both immediate and preventative.

The Contractor has the responsibility to, where appropriate, notify the relevant agency or organisation of the occurrence of an environmental incident should this be required.

The Contractor / Project Manager is responsible for reviewing environmental incidents and ensuring the appropriate correction and corrective actions have been conducted and relevant preventative actions have been implemented.

A site-specific Emergency Response Plan will be developed by the contractor and will detail the response to any environmental incidents on site. The Emergency Response Plan shall, as a minimum, include:

- A Site Plan showing:
  - layout and access details;
  - access routes and meeting points for emergency services;
  - areas used to store raw materials, products and wastes; and
  - location of hydrants, 'fireboxes' and pollution prevention equipment and materials.

5.2.2 Planning & Prevention

Risk assessments are to contain an assessment of the potential of an activity, process or substance to cause an environmental incident.

Where the risk is considered small or insignificant actions are identified within the assessment.

Where the potential for a medium, large or significant risk is identified the appropriate operational controls may be implemented to ensure risks are minimised or eliminated and if and when an incident occurs, response actions are known and effective.

5.2.3 Routine Testing

Where practicable the Contractor shall conduct periodic testing of applicable emergency preparedness and response procedures. Where testing is conducted the results of the test and any improvement actions will be recorded.

5.2.4 Response Equipment

The most likely source of environmental incident is spillage of liquids and substances either accidentally or during handling or transfer.

Prior to attempting to tackle any environmental incident personal safety is paramount. The use of correct Personal Protective Equipment (PPE) may prevent an incident becoming even more serious with response personnel sustaining injury. When considering whether to tackle an environmental incident even with the use of PPE if exposure is likely to cause injury the job is best left to the experts. PPE used for this purpose should be located near to spill and containment equipment and should be confirmed as being suitable for the hazard.

Suggested PPE includes:

1. Coverall overalls or aprons
2. Wellington boots or safety shoes
3. Rubber or nitrile gauntlets or gloves
4. Respiratory protective equipment (note that this must be face fit tested)
5. Head protection (may be required if working in a restricted space)

For small liquid spillages of substance releases containment can be effective by the placement of spill or release containment equipment local to the potential sources of an incident which can effectively cleaned up preventing any environmental risk.

For larger spills or releases, containment equipment should be sufficient to prevent spills or releases contaminating the environment and provide an additional time break to conduct an effective clean-up operation, with or without the help of specialists.

The provision of spill or release containment equipment should be appropriate to the potential hazard.

The template Pollution Prevention Equipment Inventory will be completed before construction works commence (Appendix D)

5.2.5 Control Measures

Control measures with respect to managing Emergency Response will include only trained and competent personnel to undertake tasks associated with the Scope of Work. Work activity will follow RAMS. Plant and equipment will be fit for purpose, properly maintained and only operated by trained experienced personnel.

5.2.6 Planning & Prevention

Risk assessments are routinely conducted for all activities and contain an assessment of the potential of an activity, process or substance to cause an incident.

Where the risk is considered small or insignificant actions are identified within the assessment.

Where the potential for a medium, large or significant risk is identified the appropriate operational controls may be implemented to ensure risks are minimised or eliminated and if and when an incident occurs, response actions are known and effective.

5.2.7 Emergency Response Process

For plant/equipment leaks:

- STOP the source of the spill or leak if practicable.
- CONTAIN the spill using spill kits.
- DIVERT the spill from drains and watercourses.
- CLEAN THE SPILL. Place all used spill kits and contaminated material in a waste bag, securely store and dispose of them as special waste.
- REPORT the spill to the EnvCOW/ OICHA (and Regulators if appropriate).

5.3 Rapid Response Plan

A Rapid Response Plan for pollution incidents has been developed which provides clear and concise instructions on how to respond to specific pollution scenarios.

Note: Always ensure personal safety and use appropriate PPE and refer to the COSHH assessment and/or Safety Data Sheet (SDS).

A Chemical, Product and Waste Inventory will be prepared (refer to Appendix E).

Table 5-1: Rapid Response Plan

Incident	Actions
Moderate Likelihood	
Heavy Rain – runoff	• Divert run-off (from the stripped ground) from entering the water environment by using sand or earth to create soakaway areas; • Deploy drain covers if appropriate; • Commence monitoring of contaminated water environment, and photograph regularly to record changing conditions; • Report it to EnvCOW/ OICHA; and • Report it to Regulator if discolouration or pollution of the water environment is observed.
Diesel - spillage while refuelling plant	• Stop refuelling operation then deploy and use spill kit; • Use sand/earth to divert from drains and water environment; • Cover with sand/earth to halt flow and absorb; • Report it to EnvCOW/ OICHA; and • Report it to HSEQ and Regulator, if appropriate
Dust –from vehicular activity	• Stop work or change method of work to reduce dust creation; and • Use a water bowser to damp down haul routes and work areas affected, if appropriate.
SUDS – flooding leading to contaminated discharge	• Close the outflow valve if appropriate; • Fit temporary additional filtration; • Use portable pump(s) to reduce the volume in SUDS i.e., pump to open ground; • Divert overspill from SUDS pond to open ground using sand/earth bunds; • Prevent overspill from entering drains and water environment; • Report it to EnvCOW/ OICHA; and • Report it to HSEQ and Regulator, if appropriate.
Low Likelihood	
Cement slurry – escape	• Stop the escape (where safe to do so); • Deploy drain covers if appropriate; • Deploy spill kits (if large absorbent 'oil socks/booms' are available); • Divert away from drains or water environment (e.g., earth bund); • Cover with sand/earth to halt flow and absorb; and • Report it to EnvCOW/ OICHA (and HSEQ if a significant escape)
Containers/Drums – leak or spill	• Reposition to stop leak e.g., turn so the cap is at the uppermost position; • Secure drums from moving further (chock them); • Deploy drain covers, if appropriate; • Deploy spill kits (depending on the scale of spill deploy large absorbent 'oil socks/booms' where available); • Prevent from entering drains or water environment: • Cover with sand/earth to halt flow and absorb; • Follow the guidance outlined in SDS; • Report it to EnvCOW/ OICHA; and • Report it to HSEQ and Regulator, if appropriate.
Contaminants – entering surface water drainage system/ water environment	• Stop further contamination/pollution e.g., stop the leak and divert flow; • Check the product SDS i.e., to determine if the substance is harmful to the environment; • Follow the guidance in the SDS; • Report it to EnvCOW/ OICHA; and • Report it to HSEQ and Regulator, if appropriate.
Contaminated land – an unexpected discovery	• Stop work; • Cordon off area; • Seek specialist advice, as necessary; • Report it to EnvCOW/ OICHA; and • Report it to HSEQ and Regulator, if appropriate.

Incident	Actions
Diesel – spillage/ leak from a storage tank	• Try to stop the leak (e.g., close the valve or plug hole etc); • If spillage is during the refilling operation – work with 3rd Party Contractor i.e., help them apply their emergency spill procedure; • Ensure the hose and dispenser nozzle is inside the bund; • Deploy and use spill kit (depending on the scale of spill deploy large absorbent 'oil socks/booms' where available); • Fit drain covers, if appropriate; • Use sand/earth to construct retaining bund and divert spill away from drains and water environment; • Cover with sand/earth to halt flow and absorb; • Report it to EnvCOW/ OICHA; and • Report it to HSEQ and Regulator, if appropriate.
Hydraulic oil – leak/spill from mobile plant	• Cease use of plant; • Deploy spill kit; • Try to stop the leak; • Fit drip tray under leaking hose or joint; and • Report it to EnvCOW/ OICHA; and • Report it to HSEQ and Regulator, if appropriate.
Waste (other) – unintentional escape/release	• Stop further waste from escaping; • Contain waste that has escaped; • Prevent any liquid waste from entering drains/water environment – deploy drain covers and spill kits as appropriate; and • Collect and return waste to segregated and secure storage areas.

5.3.1 Dealing with Spills

A site drainage plan will be kept at the site office showing the water interests in the vicinity of the application site. This plan will include the location of both foul water drains and surface water drains.

Spill kits will be kept on each of the worksites. The precise contents and capacity of the spill kits will depend on the detailed inventory of products that will be stored and handled on-site; however, they are likely to contain:

- Absorbent mats;
- Drain covers;
- Gloves;
- Floating "booms" or "sausages";
- Knives;
- Oil-absorbent granules;
- Polythene sheeting and bags;
- Shovels; and
- String.

The spill kits will be clearly marked, sign-posted and held close to the area where materials are stored and handled.

5.3.2 Spill Management

In the event a spill occurs the following actions will be taken:

- When a spill occurs the EnvCOW/ OICHA will be informed immediately;

- In dealing with the spillage the personal safety of the site-workers and the general public will not be compromised;
- Where required to stop or contain the spillage, work will be halted;
- The cause of the spillage will be stopped;
- The spill will be contained. Particularly pathways to any drains and water courses will be blocked as soon as possible; and
- The spilled materials will be removed and disposed of following the relevant waste regulations.

In the event of major or complicated spills, the following additional actions will be taken:

- The EnvCOW/ OICHA will assess the incident and if appropriate request a specialist spill contractor to attend the site.

After an incident all waste generated by clean-up activities will be disposed of following current legislative requirements and the site waste management plan and copies of all transfer notes retained.

5.3.3 General Spill Response

The following steps are recommended and each is discussed in more detail in subsequent sections:

1. Before acting assess the safety risks of the spilt product;
2. Organise required safety actions such as switching off electrical equipment in the area if there is a risk of explosion;
3. Conduct practical actions to stop the spill at the source;
4. Contain the spill;
5. Clean up the spill noting the location of spill kits;
6. Keep unrequired personnel out of the spill area; and
7. Complete any statutory reporting to regulators.

5.3.4 Assessment of Health and Safety Risks of the Spilt Material

In the event of a spill, it is the responsibility of all personnel to protect their own safety and that of others by assessing the HSE risks of the spilt material including.

Key actions that are necessary for response to the spill of volatile produce include:

- Removal of ignition sources;
- Notification and evacuation of personnel at risk;
- Completion of an observation-based assessment, to determine if it is safe to commence any spill counter-measure operations; if unsafe, do not commence these measures;
- If the material has strong odours or vapours, work upwind of the spill site. It may be necessary to use respiratory protection and have first aid resources at hand and is mandatory when toxic vapours may be present. Only when all hazards have been assessed as safe, proceed; and
- Be aware of where you are placing your feet and try not to step on slippery surfaces.

5.3.5 Stop the leak at Source

Consider actions required to control the source of the spill this will include:

a. Plugging the hole or shutting the valve/tap;
b. Turning a container i.e. the damaged part is to the top and the material is no longer spilling from it;

c. Put a leaking container into another secure container;
d. Identify any other reasonable actions that may control the source including repositioning the container.

5.3.6 Spills to Watercourses and Drains

(Primarily for hydrocarbons but also applicable for chemicals and uncontrolled discharges).

Where operations are in proximity to watercourses and drains, absorbent booms shall be stored adjacent to the works, before the commencement of any work (refer to GPP 22: Dealing with spills[2]). Clean-up materials and equipment will also be available at these locations.

In the unlikely event that a watercourse is affected, the following procedure shall be followed:

- Stop the source of the leak/spill.
- Secure a boom from bank to bank downstream of the spill, with wooden stakes or steel pins. The boom should be deployed at an angle to direct the pollutant to one side of the bank to aid recovery. Booms should only be deployed and secured by suitably trained people.
- The pollutant shall be removed using floating absorbents and if necessary, skimmers.
- All contaminated material and absorbents shall be 'double- bagged' and disposed of following the Waste Management Plan.
- All spillages into watercourses presenting a pollution risk shall be reported to the Regulator(s) as soon as possible – this shall be the responsibility of the Contractor.

All incidents occurring within the Site must be immediately reported to the EnvCOW/ OICHA for them to notify the nominated clean-up contractor (if required). The incident will be recorded, and the Contractor will investigate the cause and effect of the incident, recommending an appropriate change in procedures where necessary.

5.3.7 Contain the Spill

- Identify the proximity of sensitive receptors including the workforce, the surrounding environment. Also, consider the location of ignition sources or incompatible chemicals that may increase the risks presented by the spill.
- Use drain mats to cover surface drain openings and manhole cover.
- Contain the spill using absorbent material from the appropriate spill kit – oil and fuel spill kits or chemical spills kit.
- Oil and Fuel Spill Kits – are to be used for diesel, fuel, unleaded petrol, hydraulic oils, grease and other petroleum-based lubricant spills. They include oil-absorbent booms, pillows and pads, kitty litter or peat. The absorbent materials in oil and fuel spill kits DO NOT ABSORB WATER (hydrophobic i.e. they absorb hydrocarbons and repel water).
- Chemical Spill Kits – are to be used for acids, bases (alkalis), paints, solvents, thinners, coolants, degreasers, herbicides and pesticide spills.

5.3.8 Clean-up the Spill

Once the source of the spill has been controlled and the spill contained (immediate threat to the environment has been minimised) the rest of the spill will need to be cleaned up.

[2] https://www.netregs.org.uk/media/1643/gpp-22-dealing-with-spills.pdf

- Oil/fuel spills, continue to use absorbent materials from oil spill kits around the site. Used and contaminated absorbent materials should be collected in either 220L drums or in lined skip bins (depending on the size of the clean-up. This applies to spills on sealed and gravel areas.
- Spills on gravel areas – clean-up will include the absorbent materials used AND any contaminated soil in the area will need to be scraped up and stockpiled. When stockpiling, ALL contaminated soil from an oil/fuel spill (hydrocarbon contaminated) MUST be placed on a tarpaulin, and also be covered in a tarpaulin to prevent further contamination.
- For mineral, concentrate spills scrape up the spillage, use a contractor to suck up the product or wash down the affected area. Do not let wash waters enter stormwater drains and contact the EnvCOW to request the most applicable disposal method. Where possible, the material shall be recovered and recycled.
- If the material cannot be recycled, advice should be sought on appropriate disposal methods to ensure compliance with legislation and regulatory requirements.

5.3.9 Waste management and duty of care

Waste material from an incident will come under the Duty of Care from the Environmental Protection Act 1990 (as amended). This means OICHA have a legal duty to make sure that any waste the incident produces:

- Does not escape OICHA's control;
- Is transferred only to a registered waste carrier, someone registered as exempt or to an authorised site operator if you transport your waste (you can check the SEPA website for listings; exempt waste carriers may not be listed and, if you need to confirm your carrier has an exemption, you should contact us);
- Is covered by a waste transfer note, with a full description of what it is, when you transfer it to someone else;
- Is disposed of lawfully.

5.3.10 Fire

Health and Safety procedures and processes shall be established to minimise the risk of, and the appropriate management of a fire emergency. Consideration shall be given to the appropriate management of any subsequent fire water (the run-off generated from firefighting activities), such as temporary storage on-site.

This water should be considered contaminated, and it has the potential to cause pollution. In developing strategies for dealing with a fire emergency, consideration shall be given to minimising the risk to the environment associated with fire water. The guidance on the control of fire water detailed in SEPA's PPG18: Managing Fire Water and Major Spillages shall be followed as appropriate.

5.4 Incident Reporting

If during site staff duties an Environmental / Health and Safety incident, no matter how minor, is noted, then the incident will be reported, immediately to the Contractor.

The Contractor and EnvCOW shall co-ordinate any actions that are required to make the area safe or limit environmental impacts resulting from the incident.

In the event of a potentially harmful or polluting incident, spillage or discharge, the actions listed below will be followed to notify the Regulator(s) of the occurrence:

- Should a significant incident occur, the Contractor shall inform OICHA and the Regulator(s) of the occurrence of an environmental incident at the site as soon as practicably possible following notification of the incident;
- OICHA shall inform Cooke Aquaculture Scotland Ltd of the occurrence of an environmental incident at the site as soon as practicably possible detailing the nature of the incident;
- The Contract / Project Manager will notify the Regulator(s) in writing the next working day after the incident, detailing the time nature of the incident; and
- The Contract / Project Manager will investigate the incident and notify the Regulator(s) of the outcome within 14 days of the incident

6 SCHEDULE OF MITIGATION

Table 2: Schedule of Mitigation (Construction)

Feature / Topic	Mitigation	Timing
General		
Construction Environmental Management Plan	A Construction Environmental Management Document (CEMD) will be developed to ensure that the mitigation measures outlined in the EIA are followed during the proposed construction works. The CEMD will include surface water management and pollution prevention measures (e.g. Pollution Prevention Plan), and will be in place during construction and operation. The CEMD will remain a live document and will be continually updated as the work progresses. The CEMD will be developed as a practical tool to facilitate the management of environmental mitigation measures and to provide a clear roadmap of the key roles and responsibilities during construction. All mitigation measures will be incorporated into the CEMD, which will include detailed Construction Method Statements (CMS). An Environmental Clerk of Works (EnvCoW) will monitor the construction works to ensure that the CEMD and associated mitigation measures are being implemented effectively.	Construction
Best Practice	Best practice will be adopted throughout all phases of development, following current guidance as listed in Chapter 5 of this EIAR. The programme of works, including timings and methods, will be planned, monitored and managed to minimise the potential negative environmental impacts.	Construction
Pollution Incident Response Plan	A Pollution Incident Response Plan will be set out in the CEMD relating to the construction of the proposed development, statutory requirements and identification of areas of highest sensitivity. This will provide site spill response procedures, emergency contact details and equipment inventories and their location. All staff will be made aware of this document and its content during site induction. A copy will be available in the site office at all times.	Construction
Chapter 4: Water Environment		
	A Construction Environmental Management Document (CEMD) will be developed to ensure that the mitigation measures outlined in the EIAR are followed during the proposed	Construction

Construction Environmental Management Plan	construction works. The CEMD includes surface water management and pollution prevention measures (e.g. Pollution Prevention Plan), and will be in place before construction commences . The CEMD will remain a live document and will be continually updated as the work progresses. The CEMD is a practical tool to facilitate the management of environmental mitigation measures and to provide a clear roadmap of the key roles and responsibilities during construction.	
	A suitably qualified Environmental Clerk of Works (EnvCoW) will monitor the construction works to ensure that the CEMD and associated mitigation measures are being implemented effectively.	Construction
	Best practice will be adopted throughout all phases of development, following current guidance. The programme of works, including timing, direction and method of capital dredge, will be planned, monitored and managed to minimise the potential negative environmental impacts.	Construction
	A Pollution Incident Response Plan will be developed relating to the construction of the proposed development, statutory requirements and identification of areas of highest sensitivity. This will provide site spill response procedures, emergency contact details and equipment inventories and their location. All staff will be made aware of this document and its content during site induction. A copy will be available in the site office at all times.	Construction
	All activities above Mean High Water Springs (MHWS) with potential to affect the water environment require to be authorised under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR). The level of authorisation required is dependent on the anticipated environmental risk posed by the activity to be carried out. These activities could include construction drainage. Construction activities below MHWS with potential to affect the water environment require to be authorised under a Marine Licence.	Construction
Dredged Material	Mitigation measures will be delivered by the principal contractor through detailed Construction Environment Management Plans (CEMPs) that will be produced following appointment. The contractor will be responsible for producing a site specific Pollution Prevention Plan (PPP) that will apply the principles of the agreed mitigation to show how the mitigation is implemented effectively down to the specific site.	Construction
Surface Water Management	The surface water drainage will be designed to ensure that there are no untreated surface water discharges directly to surrounding coastal waters. It is proposed to replicate natural drainage around construction areas and to use source control to deal with rainwater in	Construction

	proximity to where it hits the ground in line with current Sustainable Drainage Systems (SuDS) guidance. Suitable prevention measures will be in place at all times to prevent the release of pollutants to the water environment, including adjacent coastal waters. These will be regularly inspected and maintained to ensure optimal performance.	
Site Compounds	Run-off from compounds will be captured and passed through construction drainage features prior to discharge. Foul drainage will either be contained in a closed system and disposed of at a suitable off-site facility with private treatment and discharge or, where possible, directed via a connection to the local foul drainage network.	Construction
Concrete	In the case that concrete batching was to be undertaken on-site the following mitigation measures would be implemented to minimise the potential impact of concrete batching on the water environment in line with PPG6: • Concrete batching will take place on an impermeable designated area and at least 10m from any waterbody. • Equipment and vehicles will be washed out in a designated area that has been specifically designed to contain wet concrete/ wash water. • A closed loop system will be used for wash waters. Wash waters will be stored in a contained lined pond for settlement before being reused (e.g. for mixing and washing). • No discharge of wash waters will occur on-site. All excess wash water that cannot be reused will be disposed of off-site. The following mitigation is proposed for concrete handling and placement: - Pouring of concrete will take place within well shuttered pours to prevent egress of concrete from the pour area. - Pouring of concrete during adverse weather conditions such as prolonged heavy rain will be avoided. - The CEMP will include a Pollution Incident Response Plan, and drivers of vehicles carrying concrete will be informed so as to raise awareness of potential effects of concrete and of the procedures for clean-up of any accidental spills. - Concrete acidity (pH) will be as close to neutral (or site-specific pH) as practicable as a further precaution against spills or leakage. This should be managed by the Contractor as part of their normal concrete mix selection.	Construction

Oil, Fuel, Site Vehicle Use and Storage	The risk of oil contamination will be minimised by good site working practice (further described below) but should a higher risk of oil contamination be identified then installation of an oil separator will be considered. The storage of oil is considered a Controlled Activity which will be deemed to be authorised if it complies with the Regulations. The mitigation measures to minimise any risk of contaminant release are in line with SEPA PPG and GPP documents and include the following: • Storage: o Storage for oil and fuels on site will be designed to be compliant with GPP2 and GPP8. o The storage and use of loose drums of fuel on site will not be permitted. o Bunded tanks will provide storage of at least 110% of the tank's maximum capacity. • Refuelling and maintenance: o Fuelling and maintenance of vehicles and machinery, and cleaning of tools, will be carried out in a designated area where possible in line with PPG7. o Multiple spill kits will be kept on site. o Drip trays will be used while refuelling. o Regular inspection and maintenance of vehicles, tanks and bunds will be undertaken. Emergency procedure: The Pollution Incident Response Plan will include measures to deal with accidental spillages.	Construction
Monitoring and Enhancement	The Applicant shall undertake a planned programme of compliance monitoring to verify the effectiveness of the project's environmental management during construction. Monitoring plans will be established and implemented with the agreement of OIC, SEPA, NatureScot and Marine Scotland. Specific auditing and monitoring plans will be developed by the contractor and will cover the following: • The contractor's own Environmental Management System and project monitoring plans;	Construction

	• The CEMD, schedule of mitigation register, relevant legislation and industry good practice; • All project activity; • Roles and responsibilities for those undertaking audits and monitoring; • Frequency of inspection activities (i.e. daily, weekly, monthly); • Process to deal with corrective actions/non-compliance; and Reporting procedures (including non-compliance).	
Chapter 5: Biodiversity		
General	Prior to works commencing on site (including any site clearance or preparatory works) a Construction Environment Management Plan (CEMP) detailing site specific mitigation and monitoring will be agreed with planning authority and implemented to avoided and reduce negative impacts. An Environmental Advisor/Manager will be employed to design and implement on site mitigation strategies as they are required. An independent Ecological/Environmental Clerk of Works (ECoW) will be employed to audit and report on adherence to the CEMP as well as any other relevant planning consents, environmental permits, legislation and mitigation. A silt boom to contain fine sediments will be used whilst land reclamation activities are undertaken. Inert stone material free from fine clays or organic materials will be utilised to form the outer bunds for land reclamation. The following good practice guidelines shall be adhered to and incorporated into the CEMP: • GGP 5: Works and maintenance in or near water; • PPG 6: Working at construction and demolition sites; • PPG 7: Safe Storage – The safe operation of refuelling facilities; • GPP 21: Pollution and incident response planning; and • GPP 22: Incident response – dealing with spills.	Construction

Wildlife Protection	All personal on the site should be made aware of the environmental sensitivities of the site (proximity to designated sites and presence of protected species including otter, marine mammals and fish) via the site induction and additional task specific toolbox talks as required. A pre-works check for otter should be conducted within a week prior to works commencing on the site and regularly throughout works. If otter are observed on site at any point during construction, works should be halted and advice sought from the environmental advisor. If a resting site is identified either during the pre-works check or during works, a species protection plan will be required and the need for a disturbance licence will be assessed. Where possible construction activities will be confined to daylight hours to reduce disturbance to commuting and foraging otter within the locale. Any artificial light required during construction will be fitted with shades and directed at the required work area only. A Marine Mammal Protection Plan as detailed in Technical Appendix 5.7 will be implemented to reduce the risk of underwater noise causing injury to marine mammals (and basking shark). This will involve the use of MMOs, Passive Acoustic Monitoring (PAM) devises and soft-start techniques for noise generating activities. The MMPP also details protocols to be implemented to reduce collision risk. The MMO or ECoW should also check for the presence of rafting birds on the water prior to blasting and no blasting should take place until birds have moved off. Bird scaring strategies may be required to encourage them to move away from the blast zone. The ECoW should monitor any fish deaths as a result activities such as blasting and report these to NatureScot and Marine Directorate (number of fish and species). Consideration should be given to mitigation strategies to reduce fish mortality if it becomes an issue. This can be difficult to do however with some strategies such as the use of netting or bubble	Construction

	curtains sometimes having the effect of preventing fish from moving away from noisy activities. If the Quanterness fish farm is still operational during construction, measures to dampen the transmission of sound from dredging will be considered such as the use of bubble curtains. The principal contractor will produce and implement a biosecurity plan throughout the duration of works. This will include the cleaning of equipment and plant machinery prior to deployment and at regular intervals throughout to reduce risk of transmitting non-native and invasive species. The plan will be submitted to the planning authority and other relevant consultees for approval prior to works commencing and implementation would be audited by the ECoW. A strict speed limit for both onshore and marine traffic will be implemented to reduce risk of collision with protected species (15mph on shore and 4 knots within the water).	
Chapter 6: Archaeology and Cultural Heritage		
WSI/PAD	A Written Scheme of Investigation (WSI) and Protocol for Archaeological Discoveries (PAD) to avoid or mitigate accidental impacts and manage any accidental discoveries of archaeological interest will be compiled and submitted for approval to OIC and MS-LOT and fully implemented during the construction phase of the project.	Construction
Watching Brief	Following an Archaeological Evaluation to identify the presence or absence of the known Souterrain (site 1), mitigation of avoidance, ensured by an archaeological watching brief, would ensure no direct impact upon the heritage asset. A WSI relating to works required in the vicinity of the souterrain will be compiled and submitted for approval to OIC and fully implemented during the construction phase of the project. Should avoidance prove impossible, a strategy to mitigate any direct impacts through preservation by record would be developed in agreement with the planning authority and the Orkney Islands Archaeologist.	Construction
Biodiversity Enhancement	No planting to occur on known archaeological features.	Construction

Chapter 7: Seascape, Landscape and Visual Impact		
None	The assessment of seascape, landscape and visual effects does not identify a requirement for mitigation other than already embedded within the siting and design of the proposed development. This reflects the consistency between the nature of the proposed development and the baseline conditions at the site, and that no potentially significant seascape, landscape or visual effects have been identified.	NA
Chapter 8: Socioeconomics		
Employment opportunities	Requirements upon the contractor to provide local job creation and local training either directly or through supply chain for the construction of the development to provide greater and longer lasting benefit to communities.	Construction
Local Businesses	Continue to consult with local businesses, including local tourists groups such as Orkney Tourism Group, throughout the proposed development design and construction programme to avoid significant inflow of workers during peak tourist season and large scale events , projects and activities	Construction
Local Businesses	Engage with local businesses, including marine users, to understand their access and operational requirements. Contractor and design team should ensure that current operations at the harbour can reasonably continue during construction of the proposed development and effectively communicate when there are any changes to access (including short term changes.)	Construction
	In terms of marine users, continue discussions with Cooke Aquaculture who operate the Quanterness fish farm, regarding the Hatston development proposals. Cooke Aquaculture will remain involved in the process by having access to CEMD documents and advising what would constitute appropriate mitigating mainly during construction. It was agreed that monitoring will be expected during construction to demonstrate that sediment load does not cause impacts. This will be set out in the CEMD. In addition, modelling has been undertaken as part of the EIA process to consider potential impacts on sedimentation and noise	
Local Community Capacity	Engage with local public services such as, the local authority, NHS Orkney, member organisations of the local emergency planning group, and the Community Planning Partnership to ensure there is sufficient capacity in local services and infrastructure to	Construction

	accommodate additional workers. There are a number of solutions for housing construction workers where temporary accommodation is provided either at site or in a close vicinity to the construction area. It is expected that any consent would include a condition that contractors would be expected to set out their detailed proposals prior to construction commencing;	
	Through the procurement for the project, the prospective contractors are required to set out their approach to accommodation in the context as described. This will include consideration of sustainable accommodation solutions, and will require contractors to set out their approach to how they will engage with the local supply chain to ensure maximum benefit to the project and to the local community and economy. And;	
Community Benefits	Community benefits and social value should be maximised during the construction period, such as the provision of apprenticeships, training and work experience opportunities to comply with NPF4 Policy 25. The baseline indicates that the age group 16 – 24 has the highest proportion on the island of being unemployed; targeting this group would maximise benefits and this would represent a significant opportunity to provide long term employment and development of key green skills locally.	Construction
Chapter 9.1: Accidents and Natural Disasters		
Marine Safety	Orkney Islands Council Harbour Authority existing Safety Management System, should be updated periodically as harbour operations change or new legislation arises	Construction
Chapter 9.2: Airborne Noise		
Construction Noise	Site activities during the construction phase will be carried out during the specified working hours and will follow best practice noise management techniques. No additional mitigation measures are proposed.	Construction
Chapter 9.3: Air Quality		
Trackout	Recommended mitigation measures for track out are as follow: • Use water assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use. • Avoid dry sweeping of large areas	Construction

	• Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport • Inspect on-site haul routes for integrity and instigate necessary repairs to surfaces as soon as reasonably possible • Record all inspections of haul routes and any subsequent action in a site log book • Install hard surface haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water browsers and regularly cleaned. • Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably predictable) • Ensure there is an adequate area of hard surfaced road between the wheel and wash facility and the site exit, wherever site size and layout permits. • Access gates to be located at least 10 m from receptors where possible These measures will be included within the Construction Environmental Management Document which will be produced by the contractor prior to construction and signed off by Orkney Islands Council.	
Chapter 9.4: Carbon Climate Change and Greenhouse Gas Emissions		
Construction	Opportunities of carbon reduction in the construction phase can be achieved through consideration of alternative/recycled materials, design optimisation, construction site management (e.g., sourcing energy efficient plant) and construction waste management. These examples are discussed in more detail in *Section 9.4.5* of the Carbon, Climate Change and Greenhouse Gas Emissions Assessment	Construction

A DRAWINGS

B BREEDING BIRD PROTECTION PLAN

The Contractor will undertake the following measures, as a minimum, during the breeding bird season (i.e. March to September) to minimise adverse effects on breeding birds.

- Ground preparation including vegetation stripping works to start between October to February (inclusive) with continuous working thereafter;
- Where this is not possible, a pre-start walk over of the site by a suitably experienced (and licenced) ecologist must be carried out to identify signs of breeding birds. In addition, a specific survey for breeding hen harrier* within the site and out to 1 km from the development boundary should be undertaken. A Breeding Bird Protection Plan should then be submitted for approval in writing by OIC before any ground preparation or construction works commence or restart;
- Demarcation of working corridors to prevent vehicle movements and/or storage of materials within areas that should otherwise be out with areas of work;
- Daily walkovers of the proposed development site by a suitably experienced and licenced ecological clerk of works (ECOW) / HSEQ Manager (or similar) to identify nest sites and nesting behaviour; and
- Marking of nest locations within the proposed development site by the ECoW / HSEQ Manager (or similar), who should also ensure that all personnel on site know to avoid working in the vicinity of nest sites until such times as the ECOW / HSEQ Manager (or similar) advises that the young birds have fledged or the nest failed.
- Undertaking terrestrial habitat enhancement works during September to February (inclusive) to avoid the bird breeding season.

* Hen Harriers are a Schedule 1 species and therefore have a heightened level of legal protection from disturbance.

C MARINE MAMMAL PROTECTION PLAN

D POLLUTION PREVENTION EQUIPMENT INVENTORY (ON AND OFF SITE RESOURCES)

Chemical, Product and Waste Inventory			
Type	**Location**	**Amount**	**Staff Contact**

E CHEMICAL, PRODUCT AND WASTE INVENTORY

Chemical, Product and Waste Inventory

Trade Name Substance	Solid/ Liquid gas or powder	UN Number	Maximum Amount	Location Marked on Map	Type of Containment	Health and Environmental Properties