Fair Isle Harbour Improvement Works

A.4 FiEMP

On behalf of **Shetland Isle Council (SIC)**

Shetland Islands Council

Project Ref: 11168 | Rev: Version 1.0 | Date: April 2023

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For and on behalf of Stantec UK Limited				

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1 Introduction and Background

1.1 Purpose of this report

1.1.1 This Report comprises the first iteration Environmental Management Plan (fiEMP) for the design stage of the Fair Isle Harbour Improvement Scheme (hereafter referred to as 'the Proposed Development'). Powers to construct, operate and maintain the Proposed Development are being sought from Shetland Islands Council (SIC) via the Town and County Planning (Scotland) Act 1997") for works on land and to the mean low water springs mark and Marine Scotland via the Marine Scotland Act 2010 (Marine Licenses) for the deposit or removal of a substance or object below the mean high water springs mark for the improvements to the existing harbour at Fair Isle, Shetland (hereafter referred to as 'the Site') to facilitate a new ferry linking the harbour to Grutness, Shetland. The site is located within the administrative boundary of Shetland Island Council (SIC).

1.1.2 An Environmental Impact Assessment (EIA) has been undertaken for the Proposed Development and an EIA Report (EIAR) has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (the 'EIA Regulations') and The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended). In accordance with the requirements of the EIA Regulations, the EIAR contains an assessment of the likely significant effects on the environment that may be caused during construction, operation and maintenance of the Proposed Development and describes proposed mitigation measures.

1.1.3 This fiEMP has been produced at an appropriate and proportionate level of detail for the design stage of the proposed Development. The fiEMP will be developed into the second, more detailed iteration of the EMP (siEMP) by the Principal Contractor (when appointed) once the Proposed Developments detailed design has been finalised, and the appropriate consents granted. The siEMP will be used on site to manage environmental measures and commitments. Prior to construction being completed, the siEMP will be finalised to support future management and operation of the Proposed Development. The Proposed Development will then be operated and maintained in accordance with the finalised siEMP issued at the completion of construction. **Table 1-1** provides a summary.

Table 1-1 Summary of stages of the Environmental Management Plan

Project Stage	Iteration	Produced / refined
Design	The fiEMP (previously called the Outline EMP) is produced during the design stage of the Proposed Development.	Produced
Construction (refined for the consented Scheme)	The siEMP (previously called the construction EMP) is refined during the construction stage.	Refined
End of construction	Finalise the siEMP at the end of construction stage to support the future management and operation of the Proposed Development.	Refined

1.1.4 The predicted environmental effects of the Proposed Development are identified in the EIAR which accompanies the consent and planning applications. The related actions and mitigation measures are listed in **Section 3** (Register of Environmental Actions and Commitments)

(REAC) and contained in **Table 3-2** of this document. These have formed the basis of this fiEMP.

1.1.5 This fiEMP provides details of how the environmental effects of the Proposed Development will be managed during construction and subsequent operation of the Proposed Development by:

- Ensuring all identified actions and mitigation measures identified in the EIAR and contained in the REAC are implemented;
- Ensuring compliance with environmental legislation; and
- Ensuring good practice environmental management measures are implemented.

1.1.6 Measures within this fiEMP include design, pre-construction, construction and operational mitigation. Required monitoring and enhancement opportunities are also captured within it.

1.2 The Proposed Development

Description of the Proposed Development

1.2.1 Shetland Islands Council (SIC) is progressing the Fair Isle Ferry Replacement Project to replace the existing vessel, which is approaching the end of its life and does not meet modern standards. The berthing site at Fair Isle will also be upgraded to facilitate this new ferry.

1.2.2 SIC intends to submit a full planning application and associated marine license applications seeking approval to enhance the existing ferry port at Fair Isle by:

- A new quay structure to be formed between the northern end of the existing quay and the existing breakwater, and returning along the length of the breakwater;
- A new linkspan[1] to facilitate the new roll on – roll off (Ro-Ro) vessel, and associated control hut;
- The existing breakwater is to be increased in size and height to provide greater shelter to the new quay structure and linkspan berth;
- Dredging to provide a sufficient water depth for new vessel around the proposed quay extension and linkspan;
- Repairs and re-fendering of the existing finger pier aligning structure to accommodate the new vessel;
- Substantial enlargement of existing noust, with room for access up one side of the parked vessel, and a steel access steps;
- Construction of a new winch house building to accommodate a new winch and standby winch;
- Replacement of the existing cradle and slipway to accommodate the increased size of the new vessel; and
- New lighting will extend along the rear of the extended quay to the north of the existing quay.

Construction Process

1.2.3 The construction process is expected to take place over two summer seasons due to weather restrictions during winter months:

[1] A linkspan or link-span is a type of drawbridge used mainly in the operation of moving vehicles on and off a roll-on/roll-off (RO-RO) vessel or ferry, particularly to allow for tidal changes in water level.

- North Haven Construction Phase 1 (Noust, winch house, slipway, cradle, access stairs, repairs to existing finger peir, fencing) – February to September 2024 (approximately 8 months); and

- North Haven Construction Phase 2 (Dredging, quayside, breakwater, linkspan, relocate pontoon, rock netting) – March to September 2025 (approximately 7 months).

1.2.4 Construction is expected to take place Monday – Friday 7am-7pm and Saturday 7am-1pm, with no working on Sundays or Bank Holidays. Some construction activities may need to be undertaken outside these hours, for which agreement would be sought from SIC Planning/MS-Lot.

1.2.5 Key construction activities (not in chronological order) will include the following:

- Noust expansion, existing winch house demolition;
- New slipway construction;
- New winch house construction, winch installation and commissioning;
- Pier structure repaired;
- Breakwater extended and height increased;
- Solid quay constructed to form new linkspan berth; and
- Linkspan installed and commissioned.

1.2.6 Additional details in relation to the construction of the key features listed above:

- The linkspan will be a ‘Type A’ linkspan, the same as that used at various other ferry terminals operated by Shetland Islands Council. A Type A linkspan is typically 14m in length and 5.5m wide at the nose.
- The cradle will be dimensioned to suit the chosen vessel (vessel max. 24m in length and approximately 11m in width).
- The slipway length will be confirmed based on results of the bathymetry survey, and vessel specifications. The existing slipway will become obsolete, but it is anticipated that the concrete foundations for this will be left in place. The new slipway will overlap with the existing one. This will be wider to allow use by the larger vessel. The general location of the noust will be unchanged but it is being substantially enlarged in two directions.
- In order to upgrade the cradle and slipway, the existing cradle and associated mechanical equipment will be replaced. The extension to the slipway is likely to be a reinforced concrete structure above water, and steel structure below water. Existing substructure will be re-used where possible. The cradle will be a steel structure and will operate on steel rails that will be positioned on the slipway, similar to existing. The centreline of the slipway and noust will be offset from its current position.
- The linkspan deck is a new structure and will be fabricated off-site. The linkspan deck will be delivered to site by vessel and installed on the newly constructed linkspan support structures alongside the quay once the new quay extension has been constructed.
- The dredging method will be determined from the results of the Ground Investigation and the materials that are encountered. Where sands / silts are to be dredged, an excavator will likely be used to dredge the seabed material to the required depth. If rock is to be dredged, the quality of the rock will determine whether an excavator can be used to ‘rip’ the rock from the seabed or if an alternative method will be used.

1.2.7 During the construction phase, an area of the Site would be required for a temporary construction compound (“the laydown area”) for the potential storage of materials, plants and

equipment as well as providing site welfare. Temporary work accommodation will also be present at Fair Isle so the work force will not have to vacate the island each day.

1.2.8 There is not anticipated to be significant demolition works as the majority of the existing pier is expected to be retained.

Operation

1.2.9 The Proposed Development will be designed to provide a reliable and lasting transport connection to Shetland. Implementation of a linkspan service would also improve the operational safety of the infrastructure provided at Fair Isle and Grutness. Improved turnaround times associated with a Ro-Ro service along with continuation of current practice through responding to weather windows and a faster vessel will provide the potential for operation of an increased number of sailings.

1.3 Site Location and Description

1.3.1 The Fair Isle ferry berth is located within the harbour at North Haven, on the north-east of the island. The nearest post code is ZE2 9JU and the central grid reference is HZ 22498 72527.

1.3.2 The existing pier is approximately 40m in length, to allow the ferry to moor alongside. The pier is connected to hardstanding and a berth to the north which is approximately 60m in length.

1.3.3 The harbour is sheltered from the east and west by high rocky cliffs, and notionally sheltered from the south by an isthmus (narrow strip of land between North Haven and Bu Ness), and to the north by a rock armoured breakwater approximately 80m in length and 25m in width, made up of Norwegian rock. However, northerly conditions cause significant wave motion at the berth and therefore a noust, as seen in **Figure 1-1**, is used to house the vessel overnight.

1.3.4 The noust consists of a cutting in the rock cliff, at the top of the existing slipway to provide shelter to the ferry when it is slipped. A winch is used to raise and the lower the ferry (on its cradle) up and down the slipway. The cradle runs on two slipway mounted rails that extend alongside the pier and is connected to the winch which then pulls the cradle and ferry into the noust. Currently the noust is approximately 30m x 10m. The existing noust can be seen in **Figure 1-1**.

Figure 1-1 Existing Noust at Fair Isle

1.3.5 There are seven buildings within 250m of the Site which are all uninhabited and used for storage. Existing harbour facilities comprise of the following:

- 60m long berthage with 3.60m water depth (at Mean Low Water Springs MLWS);
- 14m wide general cargo apron and storage building behind;
- Single track access road with limited space for parking;
- Finger pier aligning structure, slipway (1:10 nominal slope), cradle, noust and winch-house; and
- Fresh water and waste disposal at facilities behind the pier.

Existing Ferry and Passenger Accessibility to the Island

1.3.6 The Site is within the SIC administrative area and is connected to mainland Shetland by two lifeline transport links: air service by means of an eight seat Britten-Norman BN-2 Islander aircraft; and the existing ferry service operated by the MV Good Shepherd IV which provides the critically important supply chain and freight link as well as capacity for 12 passengers per sailing.

1.3.7 The existing ferry, the MV Good Shepherd IV is:

- Over 35-years old, having entered service on the Fair Isle run in 1986;
- An 18-metre vessel broadly similar to that of a traditional fishing vessel;

- Limited to 12 passengers; and
- Delivers cargo using a vessel mounted crane; it can carry cargo in a below deck hold and on the weather deck.

1.3.8 Whilst the primary mode of travel to / from Fair Isle for both visitors and residents is the air service via Fair Isle Airport, the ferry predominantly fulfils the supply-chain needs of the island. Nonetheless, the ferry is used by passengers when: (i) the air service is fully booked or disrupted; or (ii) there is a requirement to take equipment / goods which cannot be carried on the air service.

1.3.9 Between 2010 and 2018 1,703 sailings were completed, with the median number of yearly sailings being 184.

The Surrounding Area

1.3.10 Fair Isle is the most geographically remote inhabited island in the United Kingdom. It lies 24 miles from the Shetland Mainland and 27 miles from North Ronaldsay, the most northerly of the Orkney islands. It is administratively part of Shetland. The island has been owned by the National Trust for Scotland since 1954. Fair Isle is renowned for its wildlife and cultural heritage.

1.3.11 There is a permanent population of around 60 people, who mostly live at the south end of the island. There are no dwellings present within the Site, the nearest is located approximately 1.5km southwest.

1.3.12 There are no Public Rights of Way (PRoW) within the Site or Surrounding Area. However, as the Site is within Scotland, it comes under the Land Reform (Scotland) Act 2003 which is an Act of the Scottish Parliament to establish statutory public rights of access to land for recreational and other purposes.

1.3.13 The Fair Isle Airport is located approximately 1.15 km west of the Site. Fair Isle Airport serves the island with flights to Tingwall Airport near Lerwick.

1.3.14 There are limited roads surrounding the site, only the road leading to the Fair Isle Airport to the west and also one connecting the pier to the Fair Isle North Lighthouse.

1.3.15 There is one Category C Listed Building approximately 150m west of the Site which is a Shetland böd, a building used to house fishermen and their gear during the fishing season but is currently uninhabited.

1.3.16 Approximately 330m to the southwest of the Site is the Fair Isle Bird Observatory (FIBO). Fair Isle Bird Observatory is run by an independent charity, FIBO Trust (Registered Charity No. SCO 11160), which owns the building and a small area of land. The FIBO burnt down in March 2019 however prior to this, it was the main provider of accommodation on the island and also a significant source of income and employment. In October 2021 the FIBO charity won a bid for investment to re-build the observatory. The newly built facility is due for completion and re-opening in 2024.

1.3.17 In 2016, the seas around Fair Isle were designated as a Marine Protected Area (MPA). As of 2019 it is the only MPA in Scotland to be designated specifically as a "Demonstration and Research" MPA. The aims of this MPA designation are defined as, to demonstrate and research the use of an ecosystem approach, which includes the following:

a) The environmental monitoring of seabirds and of other mobile marine species;

b) The environmental monitoring of the factors which influence the populations of seabirds and of other mobile species;

c) The development and implementation of a local sustainable shellfish fishery;

d) The development of a research programme into local fisheries which includes research on species composition, size, distribution and temporal and spatial changes in fish stocks; and

e) Based upon the research undertaken under sub-paragraph (d), the development of a sustainable-use management programme for local fisheries.

Environmental Context and Constraints

1.3.18 The main environmental sensitivities associated with the Proposed Development relate to disturbance of ecologically sensitive habitats and important species, impacts on landscape character and visual amenity and impacts on archaeological features which are in close proximity to the Site.

1.3.19 The habitats present within the Site comprise of vegetated sea cliffs, dry heath, marine and arable land. There is limited vegetation within the Site, there are no trees present and the majority of the ground condition are made of hardstanding of the existing pier.

1.3.20 The Site is however located within environmental designations including Special Protection Areas (SPA) and a Special Area of Conservation (SAC) (North Haven, Fair Isle) and Site of Special Scientific Interest (SSSI).

1.3.21 There is one scheduled monument within the Site boundary which is the North Haven Crane (SM6589). The monument consists of a small hand-operated crane of iron construction. The monument is considered of national importance as a rare survivor of a once-ubiquitous type of pre-mechanisation harbour furniture. However, during the surveys conducted to accompany the Scoping Report (2022), it was identified that the crane had been removed from the pier, and subsequent enquiries have confirmed that this occurred in the last 2-3 years on Health and Safety grounds, as it was collapsing and a potential risk to shipping in the harbour. The whereabouts of the crane was not confirmed, although it is believed the crane was scrapped. This event has now been reported to Historic Environment Scotland by Shetland Islands Council, and at the time of writing resolution of this issue has not been confirmed. Despite the removal of the crane, the Scheduling details that the crane itself '*and the surface of the pier into which it is set*' forms part of the Scheduling, which includes a notional circle of 5m from the centre of the Scheduled Monument. Therefore, despite the absence of the crane, the Scheduled Monument remains a significant constraint.

1.3.22 The Site is not located within an Air Quality Management Area (AQMA).

1.4 Project Objectives

1.4.1 The ferry service plays a critical role in meeting Fair Isle's supply-chain, service and personal travel needs. If it is not replaced in the short-term, irreparable damage will be done to the economy of the island, threatening the long-term sustainability of the community. As well as the supply-chain and travel impacts, the seven crew are amongst the few salaried employees on the island, fulfilling multiple roles including the provision of airfield fire cover. In the event that the ferry service ceased to operate from the island, a proportion of the crew and their families would likely leave, causing skills shortages in key roles and undermining local services such as the primary school. A new, reliable and accessible island-based ferry, including harbour infrastructure at both Grutness and Fair Isle is therefore essential to the future survival of the island.

1.5 Structure of this fiEMP

1.5.1 The structure of the fiEMP is as follows:

- **Section 2: Project Team Roles and Responsibilities**. This section defines the roles which a Principal Contractor will identify within the EMP, to deliver the environmental commitments during construction.
- **Section 3: Register of Environmental Actions and Commitments (REAC)**. This section identifies the environmental commitments and mitigation to reduce and manage the environmental effects of the Proposed Development.
- **Section 4: Consents and Permissions.** This section provides a summary of anticipated consents / permissions required to deliver the EMP during construction.
- **Section 5: Environmental Asset Data and As-Built Drawings**. Provides a description of submission arrangements for providing as built drawings and environmental asset data to SIC, and a list of species surveys obtained to date.
- **Section 6: Details of Maintenance Activities and EMP Monitoring Activities**. Details of maintenance and EMP monitoring activities. This section provides procedures for monitoring and reviewing compliance within the EMP and procedures for rectification of breaching or failings of EMP measures.
- **Section 7: Induction, Training and Briefing Procedures for Staff**. This section provides a description of construction staff training procedures.

2 Project Team Roles and Responsibilities

2.1 Project Management Organisation

2.1.1 SIC (Project Team) will be responsible for overseeing management of the Proposed Development. SIC will delegate some roles and responsibilities to specialist consultants to supervise, monitor or check the Principal Contractor's method statements including sensitive activities where required. The key roles for SIC and the Principal Contractor are listed in **Table 2-1.**

Table 2-1 General site roles

Role
SIC Project Manager
Principal Contractor Site Manager
Principal Contractor Environmental Manager
Principal Contractor Environmental Clerk of Works
Principal Contractor Ecological Clerk of Works (ECoW)
Principal Contractor Community Liaison

2.1.2 Contact details for the individuals undertaking these roles will need to be confirmed by SIC Project Team prior to the commencement of the construction phase.

2.2 Site Roles and Responsibilities

2.2.1 The site-based roles and responsibilities in relation to environmental management are summarised in **Table 2-2**. The responsibilities defined in the table include those relating directly to the development and implementation of the EMP and the wider environmental responsibilities. The Principal Contractor will be required to delegate responsibilities to experienced onsite personnel within the key areas of the Site. The delegation of responsibilities will be clearly identified within relevant Scheme documents and site files.

2.2.2 Individual names and contact details will need to be confirmed and inserted into siEMP, where applicable by SIC Project Team and the Principal Contractor prior to construction. The Principal Contractor will establish a management structure that includes an organisational chart encompassing all staff responsible for delivery of environmental mitigation measures, and that will include the organisational chart within the siEMP. The organisational chart will include all roles listed in **Table 2-1** and **Table 2-2**.

Table 2-2 Roles and Responsibilities

Roles	Responsibilities
SIC Project Manager	To ensure that the Principal Contractor and the statutory undertakers comply with all relevant legal requirements, commitments and targets agreed for the Proposed Development.

Roles	Responsibilities
Principal Contractor Site Manager	Responsible for management of the construction phase of the Proposed Development. Has overall responsibility for the SIC and the relevant statutory environmental bodies on all environmental matters (as they arise).
Principal Contractor Environmental Manager	Principal Contractor Environmental Manager or the delegate shall be responsible for overseeing and maintaining the environmental components and documentation of the Proposed Development. Obtains environmental permits, licences and consents, as required; ensures compliance with the requirements and conditions of all relevant permits, licences and consents. Acts as the focal point of contact for all environmental issues on the Site and identifies key environmental concerns relating to the Site as the Scheme develops. Coordinates with environmental specialists and ensures Site environmental management compliance. Ensures compliance with environmental legislation, consents, objectives, targets and other environmental commitments, including those from the EIAR. Audits the Principal Contractor's Site Environmental Management System and Programmes (e.g. Waste Management Plan and activities associated with on-site waste management). Audits the Principal Contractor's Environmental Management System ISO 14001:2015. Monitors compliance with the environmental requirements of the Scheme. Assists in reviews of method statements. Compiles applications for unexpected authorisations with assistance of the Principal Contractor Ecological Clark of Works (ECoW) if necessary. Accompanies statutory authorities on site visits (with the Principal Contractor ECoW if necessary). Investigates environmental incidents. Assists with the delivery of environmental training of the workforce. Assesses and check survey results and updates databases and other Scheme environmental material with new information. Identifies cost saving and best practice activities. Liaises with site supervisors, site management team and general construction workers. Liaises with relevant bodies for the application and subsequent implementation of required consents and permits. Liaises with relevant stakeholders. Monitors environmental commitments in the EMP for compliance.
Principal Contractor Ecological Clerk of Works	Supports the Project Team in delivering the ecological component of the works during the construction phase. Record the progress of the environmental works. Identifies key environmental concerns on the Site as the Proposed Development develops. Monitors and updates the Principal Contractor Environmental Manager on the progress of pre-construction surveys. Provides inputs to the Health and Safety Team. Leads site induction on

Roles	Responsibilities
	environmental practices, conducts toolbox talks, and oversees specialist surveys and monitoring activities as required. Undertakes day to day monitoring and supervision of construction activities in relation to environmental aspects. Monitors environmental compliance on site. Assists in monthly formal audits with the Principal Contractor Environmental Manager. Assesses and checks survey results and updates databases, with new information. Inputs and reviews site-specific method statements. Monitors dust, noise and vibration. Monitors hours of working to meet accepted environmental noise and vibration in consultation with the relevant Environmental Health Officer. Develop and liaise with Principal Contractor Health and Safety Officer management plans, such as the Emergency Spill Response Plan. Immediate reporting of incidents to the Safety, Health and Environmental (SHE) department. Monitor all consents and permit requirements. Liaise with site supervisors, site management team and general construction workers. Provide daily updates to the Principal Contractor Environmental Manager on site progress, compliance, issues, problems, successes, etc. Accompany statutory authorities on site visits (with the Principal Contractors Environmental Manager if necessary). Identify cost saving and best practice activities.
Principal Contractor Environmental Specialist(s)	The Principal Contractor will be required to appoint suitably qualified environmental specialists, such as: Ecologist(s) to supervise works which are potentially impacting on protected species or identified risks identified during works.
Principal Contractor Community Liaison Officer	Key liaison with all relevant parties including site personnel, other statutory bodies and regulatory authorities, relevant community groups, and business and residents in local communities. Notifies occupiers of nearby properties of the nature and anticipated duration of planned construction works that may affect them. Establishes a dedicated freephone telephone helpline together with a dedicated email address and postal address for enquiries and complaints during the construction phase. The relevant contact numbers, email and postal addresses will as a minimum be displayed on signs around the construction site and will be published on the project website. Maintains and develops a Community Relations Strategy Maintains comment and enquiries log; disseminates identified comments for response and action.

2.3 Detailed Principal Contractor Responsibilities

Pre-Construction

2.3.1 The Principal Contractor is responsible for approving the appointment of the Environmental Manager and any environmental specialists prior to any work starting on site.

2.3.2 The Principal Contractor is responsible for the following prior to construction commencing:

- Developing the fiEMP into the siEMP.
- Defining roles and responsibilities for their own and their key subcontractors' personnel relating to environmental issues.
- Developing an environmental training plan covering all personnel.
- Developing a programme of internal and subcontractor inspections/monitoring.
- Developing Scheme-specific emergency procedures for environmental incidents (these will be outlined within the siEMP).
- Finalising and implementing a programme for works to allow all preconstruction surveys to be arranged and completed within the required time frame.
- Agreeing a non-compliance reporting procedure with SIC Planning Team to manage any environmental incidents or non-compliance events for the Proposed Development.
- Developing the required Environmental Control Plans (ECPs). These will be updated as required up to construction commencement to reflect any new, relevant information provided by SIC Planning Team or other statutory consultees (e.g., further consent conditions, landowner agreements) or through design development, construction planning, pre-construction surveys etc.

Construction

2.3.3 The Principal Contractor is responsible on site for delivering the commitments in the REAC, as described within the Scheme design and controlled by the EMP.

2.3.4 The Principal Contractor will implement the procedures set out in the EMP with technical advice from competent environmental specialists. They are responsible for all their subcontractors on site and for ensuring these subcontractors comply with the requirements of the EMP.

2.3.5 The Principal Contractor is responsible for monitoring compliance with legislation and that good practice is followed throughout the duration of the construction.

2.3.6 The Principal Contractor must ensure that all onsite works are adequately monitored.

2.3.7 The Risk Assessments and Method Statements (RAMS) and ECPs will be used to ensure that all environmental commitments are delivered on site. The success of implementing the requirements of the RAMS, ECPs and delivery of mitigation measures relating to the Proposed Development will be the responsibility of the Principal Contractor.

2.3.8 Any improvements or deviations relating to environmental matters required to the RAMS and/or ECPs shall be approved by the Principal Contractor Environmental Manager and will be subject to SIC consent where required. The Principal Contractor will provide regular

feedback and information to the SIC Project Team and Principal Contractor Environmental Manager on the progress and success in delivering all mitigation and commitments on site.

2.3.9 The REAC will be updated to demonstrate progress to date and for environmental auditing purposes, with updates periodically sent to the relevant SIC management personnel.

2.3.10 All site personnel will have the responsibility and authority to halt works in any activity where environmental commitments are not being successfully delivered or to prevent legal requirements from being breached.

2.3.11 All site personnel will be encouraged to draw attention to any environmental risk or potential environmental risk arising on site (for example, refuelling being carried out too close to a watercourse or working outside the agreed limits of deviation for any aspect of the works). This approach will be promoted in all site inductions and training.

2.3.12 Any incidents or non-compliance with commitments will be recorded using the Principal Contractor management processes and will be required to contain the following information:

- How to classify incidents/hazards;
- How to manage minor incidents; and
- How to manage major incidents.

The Principal Contractor will also:

- Have sole responsibility for successful implementation of pollution prevention measures;
- Take all reasonable precautions and undertake all reasonable measures within their control to ensure that all legal requirements are complied with and that no unnecessary damage, disturbance or pollution results from undertaking the works; and
- Be available for environmental audits monthly.

2.3.13 Immediately prior to construction, SIC's Employer's Agent (or equivalent) and the Principal Contractors nominated person will undertake a site condition survey of each section of the Proposed Development. This survey will usually include a photographic record. This will be used to ensure effective reinstatement following completion of the works and provide a 'baseline' to assess any compensation claims with landowners.

2.3.14 The Principal Contractor is responsible for delivering the Scheme environmental training programme, including toolbox talks, throughout the construction works, ensuring all staff are trained adequately and to the agreed level prior to starting work on site.

2.3.15 The environmental aspects of the works shall be inspected on a regular basis in accordance with the Principal Contractors processes which cover the following aspects:

- How to plan and undertake contract targeted risk monitoring;
- Targeted risk monitoring planner; and
- Risk-based monitoring check sheet.

Post-Construction

2.3.16 The Principal Contractor is responsible for correcting defects (as defined under the main construction contract) for 12 months following contract completion. This is known as the 'defects period'. The defects period applies to relevant works following completion of the main construction works and completion of a subsequent five-year period where the Principal Contractor has responsibility for aftercare and management of environmental works.

Communications

2.3.17 The Principal Contractor will establish and maintain procedures for internal communications between the various levels and functions of the team during construction. Internal communications include:

- Advising of non-conformances to relevant managers;
- Communicating environmental commitments to the construction team;
- Communicating the environmental policy to the construction team;
- Raising awareness of environmental issues to the construction team; and
- Reporting incidents to relevant managers.

2.3.18 The Principal Contractor will maintain an ongoing liaison with the statutory/regulatory bodies during the construction phase.

Stakeholders

2.3.19 In meeting the requirements of this EMP there are several key stakeholders to be engaged prior to and during the construction of the Proposed Development. These include:

- Shetland Islands Council;
- Marine Scotland (MS-LOT);
- NatureScot;
- Local residents and businesses; and
- Affected landowners.

Complaints Procedure

2.3.20 There will be a complaints procedure put in place in the siEMP to receive and act upon complaints. A complaints log will be maintained, and a monitoring system implemented throughout the works. This enables all complaints to be addressed and a satisfactory outcome reached for all parties involved.

2.4 Reviews

2.4.1 The EMP process will be subject to periodic review throughout the construction and handover periods. The timing of reviews will be agreed with SIC Project Manager.

3 Register of Environmental Actions and Commitments

3.1.1 The Register of Environmental Actions and Commitments (REAC) identifies the environmental commitments made during the design stage to address the potential environmental effects of the Proposed Development.

3.1.2 The REAC described in **Table 3.2** presents a register which has been developed using information presented in the EIAR. The REAC will be updated by the Principal Contractor when preparing the siEMP and then 'as required' as the Proposed Development progresses. Each EMP will be prepared in accordance with the principles of this EMP (design).

3.1.3 The REAC provided in **Table 3.2** includes:

- A clear and specific description of the action;
- The objective of the action;
- How the action is to be implemented/achieved;
- The source of the action, including references for source documentation e.g. EIAR;
- Naming of the person responsible for the action;
- Achievement criteria and reporting requirements;
- The project stage, date or implementation and achievement; and
- Details of any monitoring required and corrective action.

3.1.4 **Table 3-1** provides a summary of the scope of each column within the REAC.

Table 3-1 Explanatory guide to REAC table columns

Column	Explanation
Reference (ref.)	A unique identifier defined within these REAC tables to enable simple reference to individual measures
Action / commitment	Clear and specific description of the action/commitment is defined, including the specific location. The location for the action is scheme wide, unless otherwise stated
Assumptions	The assumptions on which the action/commitment is based
Objective	The objective of the action/commitment, including alignment with Project Objectives in section 1.4 Reference to relevant legislation requirements
How the action/commitment will be implemented/ secured	How the action is to be implemented/achieved, including details of risk management

Column	Explanation
Source reference (source ref.)	The source of the action (e.g. mitigation reference in the EIAR, Habitat Regulations Assessment) including confirmation of commitments agreed with stakeholders Where no source reference is given, the measure is normally one which is relevant across a range of technical areas and is a broader control measure (e.g. working hours)
Responsible person(s)	The person or body responsible for delivery of the action/commitment; this will often be the Principal Contractor
Achievement criteria and reporting requirement (if applicable)	The criteria which define the successful implementation of the action/commitment, such as a document approval which confirms the action has been undertaken. This will be populated by the Principal Contractor's Environmental Manager in the siEMP
Project stage	The anticipated project stage, date of implementation or achievement D = Design P = Pre-construction C = Construction O = Operation A = All This will be populated by the Principal Contractor's Environmental Manager in the siEMP
Monitoring requirements	Details of any monitoring that is required in relation to the action/commitment (including in relation to likely significant adverse effects). This will be populated by the Principal Contractor's Environmental Manager in the siEMP

Table 3-2 Record of environmental actions and commitments

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
General							
G1	Appoint Environmental Manager and ECoW to manage all environmental issues during construction.	To ensure environmental measures that have been committed are implemented. The assumption is that the Environmental Manager and ECoW will be appointed during the construction preparation phase.	N/A	Principal Contractor	Environmental Manager and ECoW appointed.	P	N/A
G2	The Principal Contractor shall have an Environmental Management System (EMS) certified to BS EN ISO 14001. The Principal Contractor's EMS will define appropriate control measures and monitoring systems to be employed during the planning and construction of the works for all relevant topic areas. The Principal Contractor's EMS shall cover the activities of all their sub-contractors. The Principal Contractor will also be required to coordinate with other contractors and relevant parties that may affect their works. This will be documented in their EMS, as appropriate. As part of their EMS, the Principal Contractor will commit to planning works in advance to ensure that, in so far as is reasonably practicable, that measures to	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	N/A	Principal Contractor	Completion of siEMP.	P	Review/approval

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	reduce environmental effects are integrated into the construction methods.						
G3	The Principal Contractor shall prepare a siEMP for the Proposed Development, in accordance with this fiEMP, prior to the commencement of construction. The siEMP will be finalised at the end of the construction stage to support the future management and operation of the Proposed Development.	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Proposed Development. This will then be finalised at the end of construction.	EIAR	Principal Contractor	Preparation of siEMP	P/C	N/A
G4	Designated waste management procedures and segregation of waste in compliance with Waste Management Regulations, develop a Site Waste Management Plan (SWMP). This plan will be prepared by the Principal Contractor during the detailed design stage and will append the siEMP.	To ensure waste is disposed of appropriately and recycled where possible and managed. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Good Practice	Principal Contractor	Site Waste Management Plan	P	N/A
G5	Develop a Materials Management Plan (MMP) for the Scheme in accordance with good practice. The MMP will be prepared by the Principal Contractor during the detailed design stage and will append the siEMP.	To ensure that materials are managed. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Good Practice	Principal Contractor	Material Management Plan	P	N/A
G6	The Principal Contractor will prepare Environmental Method Statements for environmental topic areas at the detailed	To ensure the EMP is appropriate to the Scheme phase and the scope of	Good Practice and EIAR	Principal Contractor	Environmental Method Statements	P	N/A

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	design phase (for example site piling) for construction, as required. These will be appended to the siEMP.	works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.					
G7	Establish a Change Register to list and record all changes made to the EMP. This will be appended to the siEMP.	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Good Practice	Principal Contractor	N/A	P/C	N/A
G8	All statutory consents, permits or licenses required for the construction should be obtained in advance of works commencing. Any conditions included in consents/licenses/permits should be documented in the siEMP and considered as part of the planning, design and construction process.	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	EIAR	Project Team / Principal Contractor	N/A	P/C	N/A (unless monitoring requirements within the conditions of consents, permits or license).
G9	A copy of all relevant environmental applications and consents / licences / permissions should be kept in a designated Project Environmental File and copies provided to SIC as soon as practical after submission and receipt.	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor.	EIAR	Project Team / Principal Contractor	N/A	P	N/A

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
		The assumption is that the siEMP will be implemented throughout the construction of the Scheme.					
G10	The Principal Contractor should identify best practices on a regular basis and submit to SIC for consideration and wider circulation.	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	N/A	Principal Contractor	N/A	P/C	N/A
G11	Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.	To ensure that engagement with stakeholders is appropriately managed. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	N/A	Principal Contractor	Stakeholder Communications Plan	P/C	N/A
G12	The site supervisor will give general talk/briefing prior to construction starting plus specific tool box talks prior to specific work activities starting. These talks will highlight any sensitive features, including the designated sites (SPA, SPA and SSSI) and qualifying features.	To ensure that all staff are trained adequately and to the agreed level prior to starting work on site.	N/A	Principal Contractor	N/A	P	N/A
G13	Adherence with relevant SEPA Guidance for Pollution Prevention (GPPs), including GPP 5 (Works and maintenance in or near water).	To ensure pollution prevention is followed correctly.	Good Practice	Principal Contractor	N/A	C	N/A

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	Pollution Prevention Guidance (PPGs) will be followed if no corresponding GPP is available.						
G14	Refuelling over bunded areas. Oils, fuels and chemicals to be stored in fully bunded areas.	To ensure spills do not enter the land or sea whilst refuelling.	Good Practice	Principal Contractor	N/A	C	N/A
G15	Provision of spill kits and training for workers on how to use them.	To ensure spills do not enter the land or sea.	Good Practice	Principal Contractor	N/A	C	N/A
G16	The Contractor will produce a contingency plan for dealing with spills or environmental incidents.	To ensure good practice if a spill or environmental incident occurs.	Good Practice	Principal Contractor	A Contingency Plan	C	N/A
G17	The Contractor will ensure vessels and plant involved in the operational activities for the works adhere to the industry recommended guidelines for preventing the introduction of Invasive Non-Native Species (INNS).	To prevent the introduction of Invasive Non-Native Species (INNS).	N/A	Principal Contractor	N/A	C	N/A
G18	Appropriate staff will be informed of relevant marine and terrestrial INNS. These staff will be cognisant of guidance produced by NatureScot for the prevention of introduction of non-native species (Cook et al., 2014) and draft guidance on biosecurity for the Outer Islands (RSPB, 2021).	To prevent the risk of introducing invasive non-native species into Grutness.	N/A	Principal Contractor	N/A	P/C	N/A
G19	The Contractor will produce a Ballast Water Management Plan (if relevant) to prevent the risk of introducing invasive non-native species into Fair Isle.	To prevent the risk of introducing invasive non-native species into Fair Isle.	N/A	Principal Contractor	Ballast Water Management Plan (if relevant)	O	N/A

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
G20	Dampening down any stockpiled materials	To minimise dust during construction	Good Practice	Principal Contractor	N/A	C	N/A
G21	All equipment will be washed and cleaned to ensure that no contaminants are brought into contact with the marine or terrestrial environment.	To minimise air pollution	Good Practice	Principal Contractor	N/A	C	N/A
G22	Well maintained and serviced plant and equipment, this also includes marine vessels that are used during construction.	To minimise emissions and spills if plant and equipment are in good condition.	Good Practice	Principal Contractor	N/A	C	N/A
G23	The Contractor will contact the Fair Isle warden prior to works commencing and inform the warden once works have finished.	To keep Fair Isle Head warden up to date with construction.	EIAR	Principal Contractor	N/A	P/C	N/A
G24	Limits on working hours	Construction is expected to take place Monday to Friday 7am-7pm and Saturday 7am-1pm, with no working on Sundays or Bank Holidays. Some construction activities may need to be undertaken outside these hours, for which agreement would be sought from SIC Planners /MS-Lot.	EIAR	Principal Contractor	N/A	C	N/A
Archaeology and Heritage							
AH1	A watching brief for the noust is likely to be required during excavation, and any other intrusive groundworks.	A watching brief will ensure archaeological remains are identified, investigated and recorded.	Good Practice	Principal Contractor	N/A	C	N/A

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
AH2	A Written Scheme of Investigation (WSI) must be prepared for the works to set out procedures for managing any features that appear to be of archaeological importance that are discovered in the course of construction works to the noust.	The WSI will ensure compliance with the relevant legislation and will be finalised and agreed in consultation with Shetland Amenity Trust (SAT) prior to construction works.	EIAR	Principal Contractor	Written Scheme of Investigation	P/C	
Terrestrial Biodiversity							
TB1	An ECoW will be present on site during key periods of the construction phase. The ECoW will be required to make certain that all committed mitigation measures are adhered to.	To ensure biodiversity effects are avoided or reduced. Assumed that they will be in place throughout construction.	EIAR	Principal Contractor / ECoW	N/A	C	N/A
TB2	Areas of grassland under construction temporary laydown and stockpile areas will be protect using geotextile membrane or similar.	Protection of the grassland as much as possible during construction.	EIAR	Principal Contractor	N/A	P/C	N/A
TB3	Develop a Construction Bird Mitigation Plan. This will be secured through planning condition in agreement with consultees including NatureScot and SIC Planners, and will include details of: ▪ All bird species likely to be found on site and their legal status ▪ Construction activities which could affect birds	To protect SPA bird species (including Fair Isle wren) along with other breeding birds during construction phase	EIAR	Principal Contractor	Construction Bird Mitigation Plan	C	N/A

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	▪ Pre-construction bird surveys to identify presence of nests within and adjacent to the site ▪ Protection of nest sites during construction, including the establishment of exclusion zones where required ▪ Ongoing monitoring of active nest sites within and adjacent to the Site and actions to be taken to avoid damage or destruction of nests, or unlawful disturbance						
TB4	Finalise the Biosecurity Management Plan with National Trust, NatureScot and SIC Planners.	To protect SPA bird species (including Fair Isle wren) along with other breeding birds during construction phase	EIAR	Principal Contractor	Invasive Non-Native Species Control Plan	C	N/A
TB5	Construction works will be carried out in accordance with pollution prevention measures to avoid accidental pollution events during construction could include source control, settlement tanks, silt fencing and dust suppression. Measures will be informed by Construction Industry Research and Information Association (CIRIA) guidance, in particular C532 Control of water pollution from construction sites, and C650 Environmental Good Practice on Site.	To ensure biodiversity effects are avoided or reduced. Scheme will result in a loss of habitats.	Good Practice and EIAR	Principal Contractor	N/A	C	N/A

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
TB6	Fencing of adjacent designated areas and retained important habitat will be installed to protect the habitats and avoid accidental damage. Vehicle numbers and movement on the vegetation will be kept to a minimum.	To ensure biodiversity effects are avoided. Assumes construction may have impacts on designated areas and / or important habitat.	EIAR	Principal Contractor	N/A	C	N/A
TB7	Measures will be provided to avoid entrapment of animals during construction, such as covering excavations at night or where this is not feasible providing escape ramps.	To ensure biodiversity effects are avoided. Assumed species may become trapped.	EIAR	Principal Contractor	N/A	C	N/A
TB8	During construction the Environmental Manager shall develop and maintain a register of Sensitive Habitats and Protected Species encountered on the site.	To ensure biodiversity effects are avoided or reduced. Assumed various habitats and species may be affected by the Scheme.	EIAR	Principal Contractor	N/A	C	N/A
TB9	In the eventuality that a protected unforeseen species is found on the site during construction, the area should be isolated and protected from any further construction activities immediately. The Project Manager and Environmental Manager should be notified immediately; and the Principal Contractors ECoW should propose mitigation options-based impact evaluation. Localised construction activities should not recommence without the prior approval of the Project Manager and ECoW.	To ensure biodiversity effects are avoided or reduced. Assumed unforeseen species may be identified.	EIAR	Principal Contractor	N/A	C	N/A

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
Climate Change							
CC1	Material excavated during construction is to be processed for use in the works wherever possible to reduce the amount of material disposed of.	To minimise carbon usage and emissions. Assumed material excavated can be re-used on site.	EIAR	Principal Contractor	N/A	C	N/A
CC2	Construction compounds are located close to the area of works which will reduce the distance of vehicle trips.	To minimise carbon usage and emissions. Assumed construction compounds will be located in appropriate locations.	EIAR	Principal Contractor	N/A	C	N/A
CC3	Using materials with lower embedded GHG emissions and water consumption where possible.	To minimise carbon usage and emissions. Assumes materials with lower embedded GHG emissions will be used.	EIAR	Principal Contractor	N/A	C	N/A
CC4	Using sustainably sourced materials where possible.	To minimise carbon usage and emissions. Assumes sustainably resources materials will be sourced.	EIAR	Principal Contractor	N/A	C	N/A
CC5	Using recycled or secondary materials where possible.	To minimise carbon usage and emissions.	EIAR	Principal Contractor	N/A	C	N/A

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
		Assumes where possible recycled or secondary materials will be used where possible.					
CC6	Management of plant and equipment use so that there is no unnecessary idling of engines and equipment is maintained to check they are operating optimally.	To minimise carbon usage and emissions. Assumes idling will be minimised.	EIAR	Principal Contractor	N/A	C	N/A
CC7	Lower carbon energy sources for the site welfare facilities with the potential to explore the use of solar panels to reduce reliance on diesel or petrol generators for electricity.	To minimise carbon usage and emissions. Assumes appropriate site welfare facilities will be sourced.	EIAR	Principal Contractor	N/A	C	N/A
CC8	All materials required for construction will be transported to the site on a boat rather than via aviation. Whilst this does release GHGs, it is the only feasible way to get materials onto the Island and it is less GHG intensive than HGVs and planes.	To minimise carbon usage and emissions.	EIAR	Principal Contractor	N/A	C	N/A
CC9	Prefabrication is the practice of assembling structural components off site and transporting them to the site of construction where they can be assembled. This practice will therefore reduce the amount of on site fabrication, reduce the amount of diesel being burnt on site and result in less direct emissions burnt on site.	To minimise carbon usage and emissions.	EIAR	Principal Contractor	N/A	P/C	N/A
Socio-economics							

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
SE1	SIC Project Team will inform local businesses / residents of proposed works via the Proposed Development website.	To reduce effects on population and human health. Assumes this will be implemented throughout construction.	EIAR	SIC	N/A	P/C	N/A
SE2	Clearly establish the working area to prevent any encroachment into the construction area by third parties.	To reduce effects on population and human health. Assumes fencing will be in place throughout construction	EIAR	Principal Contractor	N/A	P/C	N/A
SE3	The relationship with the landowners, occupiers, stakeholders and the local community will be maintained throughout the construction phase through the Proposed Development website and a dedicated stakeholder representative appointed by the Principal Contractor.	To reduce effects on population and human health. Assumes good relationship will be maintained.	EIAR	Principal Contractor	N/A	C	N/A
SE4	Construction site will be clearly delineated and fenced. This will ensure no trespassing onto land with construction activities and therefore reduce health and safety risks.	To reduce effects on population and human health. Assumes fencing will be in place throughout construction.	EIAR	Principal Contractor	N/A	C	N/A
SE5	Public notices, particularly those relating to comments on site activities will be inclusive to all protected groups under the Equalities Act 2010.	To reduce effects on population and human health. Assumes signage will be put out on site.	EIAR	Principal Contractor	N/A	C	N/A

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
Landscape, Seascape and Visual							
LSV1	Opportunities to reduce impacts of nearby highly sensitive visual receptors should be sought through sensitive design of construction compounds e.g. organising compound features and using earthworks / fencing to screen internal activities during the construction phase.	To ensure landscape, seascape and visual effects are reduced. Assumes opportunities to review construction compound layout as detail design progresses.	EIAR	Principal Contractor	N/A	C	N/A
LSV2	Inclusion of Passive Infrared (PIR) sensors on lighting to reduce visibility of these features in the night time environment.	To reduce impacts to the night time environment with artificial lighting.	EIAR	Principal Contractor	N/A	C/O	N/A
Marine Geomorphology							
MG1	The design minimises the volume of sediment to be dredged and potential changes to hydrodynamics, only dredging the necessary volume to prepare the seabed for construction and to accommodate the proposed vessel draft.	To ensure impacts to marine geomorphology and hydrodynamics are reduced.	EIA	Principal Contractor	N/A	D	N/A
Marine Ecology							
ME1	Vessels used for the works will adhere to the general principles in the Scottish Marine Wildlife Watching Code.	To minimise marine disturbance.	Good Practice	Principal Contractor	N/A	C	N/A
ME2	The ECoW will be on site at all times during both years to ensure that Fulmar nests are not damaged by construction work, specifically the placement of rock armour	To ensure environmental measures that have been committed are implemented.	EIAR	Principal Contractor	ECoW appointed.	C	N/A

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	around the breakwater. They will also monitor the impact of the works on nearby breeding birds (primarily Fulmar, but also Puffin) to establish whether there are any detectable responses of the birds to the different construction activities to inform future work in the area. The EcOW will also liaise with the FIBO warden to ensure that the Arctic Tern colony is not negatively impacted.						

4 Consents and Permissions

4.1 Regulations

4.1.1 The principal consent for the Proposed Development is sought via the Town and Country Planning (EIA) (Scotland) Regulations 2017 and Marine Scotland Act 2010 (Marine Licenses). This provides development consent for the works and enables land acquisition and possession, along with many consents and powers which are enacted at the same time. However, there is a need to supplement the consent with additional permissions that relate directly to measures within this EMP.

4.1.2 It will be the responsibility of the Principal Contractor and the statutory undertakers and their contractors, to ensure all licenses, consents and permits are obtained within the relevant timescales and all conditions of these licenses, consents and permits are complied with.

4.1.3 **Table 4-1** lists the anticipated consents, permits and licenses that will be required during construction of the Proposed Development. This will be reviewed and updated by the Contractor as required throughout the construction phase.

Table 4-1 Anticipated Consents, Licenses and Permits Required

Type of license and reference	Issuing authority	Requirement	Comments / actions
European Protected Species License – Cetaceans	NatureScot	To ensure Cetaceans are protected during the construction phase	Apply for a license
Disposal of dredged material	Marine Scotland	To allow for the appropriate disposal of dredged material.	License will only be granted if the dredged material meets the criteria for acceptable sea disposal.

4.2 Recording

4.2.1 A register of environmental permits and a record of all consents, licenses and permits relating to construction activities will be maintained and updated by the Principal Contractor and made available for audit to SIC and the Principal Contractor Environmental Manager.

5 Environmental Asset Data and as Built Drawings

5.1 Collection and Submission of Environmental Data

5.1.1 The collection and submission of environmental data is an ongoing process. At this (design) stage of the Proposed Development, environmental data has been submitted through the publication of the EIAR (which forms part of the suite of documents accompanying the planning application. This includes the submission of all species surveys results undertaken to date.

5.1.2 Where environmental data is expected to be required during the pre-construction and construction phases, the Principal Contractor is responsible for collating and submitting this data to SIC and any relevant stakeholders. During these stages, the Principal Contractor should update this section of the fiEMP to detail the submission arrangements of data.

5.1.3 **Table 5-1** summaries the ecology surveys undertaken to inform the EIAR.

Table 5-1 Summary of species surveys obtained to date

Survey Type	Document reference	Date(s) undertaken	Location
Benthic Surveys	**Appendix 14** EIAR	July 2022	North Haven, Fair Isle
Vegetation Survey	**Appendix 8** EIAR	July 2022	North Haven, Fair Isle

5.2 As Built Information

5.2.1 The process for preparing, submitting and reviewing as built information relevant to the environment will be detailed within the siEMP.

5.2.2 The Principal Contractor would undertake both the design of the temporary works and construction of the Proposed Development. Engineering data, including design drawings, used in the EIAR will be made available to the tenderers and/or the appointed Principal Contractor as appropriate.

5.2.3 As such, the Principal Contractor would be required to submit design drawings for the temporary works and as built drawings on completion to SIC as required.

6 Details of Maintenance Activities and EMP Monitoring Activities

6.1 Environmental Monitoring Requirements

6.1.1 This section describes systems of recording and inspections that will be required to maintain an audit trail of the environmental obligations. This will be managed through the Quality and Safety Management Systems (QMS) and the Environmental Management System (EMS) of the Principal Contractor which will be certified in line with the ISO 14001 standards.

6.1.2 The EMS will include methods for monitoring, recording and implementing environmental management on site, and for responding to any noted areas of non-compliance. This will ensure that a high standard of environmental control is maintained through the lifetime of the Proposed Development through the corrective action system managed by the Principal Contractor.

6.1.3 Specific monitoring and reporting requirements are still to be developed, some in consultation with third party stakeholders. Confirmed arrangements included in the siEMP.

6.2 Environmental Management Plans

6.2.1 The Principal Contractor will be required to provide environmental management plans which inherently require monitoring of environmental data and the interaction with construction activities. Environmental management plans that are likely to be required as part of the Proposed Development works include but are not limited to:

- Site Waste Management Plan (SWMP) – provides a structured approach to minimising waste on site and waste management during the construction of the Proposed Development.
- Materials Management Plan (MMP) – sets out the relevant regulations and approach for dealing with excavated ground materials as a result of the Proposed Development.

6.3 Environmental Control Plans

6.3.1 Environmental Control Plans (ECPs) are key documents which ensure that the construction-related mitigation measures and actions set out in the REAC are successfully implemented on site. ECPs inform the works and the development of associated task-specific Risk Assessments and Method Statements (which will be included in the siEMP). It is expected that the following ECPs will be prepared / finalised, as appropriate, for the Proposed Development as part of the siEMP:

- Emergency Spill Response Plan – sets out the procedures for dealing with emergency situations involving loss of containment.
- Temporary (Construction) Drainage Strategy – details the temporary drainage strategy for the Proposed Development.

6.3.2 As noted above, all ECPs will be developed to their full detail for the siEMP during the detailed design and construction planning phase. ECPs are live documents that are subject to updating and refinement as required changing needs of the works during construction.

6.4 Inspection Checklist

6.4.1 The Principal Contractor as site owner will ensure that environmental mitigation and staff responsibilities are made clear to site managers, sub-contracted staff and site supervisors. This will be managed through site inductions and specialist training as required. The Principal Contractor will make key staff aware of their responsibilities for undertaking daily routine checks of the site and equipment.

6.4.2 It will be essential that the Principal Contractor has processes and protocols in place for environmental aspects to be checked. The Principal Contractor will insert their standard inspection forms and checklists that are associated with their internal EMS into the EMP appendices for information.

6.4.3 Once inspection and checks have been completed, they will be logged and corrective actions implemented by the delegated site manager in discussion with the Principal Contractor.

6.5 Monitoring of Proposed Mitigation

6.5.1 The Principal Contractor will be responsible for implementing and, where appropriate, monitoring the mitigation measures outlined in **Table 2-2.**

6.5.2 As described in **Table 1-1** and **Table 3-2**, the Contractor's compliance with specific mitigation measures will be monitored through a number of different means. Monitoring of compliance and ensuring construction activities are carried out in such a manner to reduce environmental impacts may be conducted by an Environmental Clerk of Works (EnvCoW), an Ecological Clerk or Works (ECoW) or an ecologist appointed by SIC. The specific measures these representatives may take in order to provide this monitoring of compliance will be detailed in the Employers Requirements in the Contract.

6.5.3 The Principal Contractor will keep an overall project record of environmental mitigation monitoring and any potential areas of non-compliance associated with implementation of the EMP. This should be managed and controlled within the standard Project Control Framework (PCF) project filing systems.

7 Induction, Training and Briefing Procedures for Staff

7.1 General

7.1.1 The Principal Contractor will develop a programme of training on environmental issues prior to and during the construction stage. On commencement of site mobilisation, the Principal Contractor will be responsible for site inductions and training of all personnel on the site, whether full time staff, subcontractors or visitors.

7.1.2 All individuals working or visiting the site will be required to attend the Principal Contractor's site-specific induction. Site inductions for full time staff and subcontractors will be tailored to their working conditions and activities. Site inductions for visitors will be tailored to those areas of the site they are visiting and what activities they are undertaking on site. Further details will be given in RAMS briefings prior to undertaking an activity. Those participating in or near to specific activities that have an environmental impact may be required to attend additional training or toolbox talks led by the Principal Contractor or environmental topic specialists.

7.1.3 The training will equip relevant staff with the necessary level of knowledge on health, safety, community relations and environmental topics. Method Statements will be prepared for specific activities prior to the works commencing, including environmental protection and mitigation measures and emergency preparedness appropriate to the activity covered (Method statements will be included in the siEMP).

7.1.4 All personnel on site will be made aware of the Principal Contractor's Environmental Policy, the Register of Environmental Legislation, the REAC and the relevant ECPs included in the EMP.

7.1.5 It is a requirement for the site to maintain the standard of environmental management and minimise risks that could negatively impact on the environment. The Principal Contractor must keep a record of training for audit and monitoring purposes.

7.2 Training and Site Induction

7.2.1 All site personnel and visitors are to receive site safety induction and environmental awareness training from the Principal Contractor, prior to commencing work on site. This will introduce accountability for personnel working on the Proposed Development. Environmental training at the induction will include, but not be limited to, the following:

- Site induction
- Toolbox Talks where relevant to specific works
- Principal Contractor's Environmental Policy
- Environmental legislation requirements
- General environmental awareness and environmental site rules
- Site organisation
- Spill kit use and locations
- Emergency Response Plans

- Site traffic protocols and routes
- Warning signs
- Waste management and movement
- Ecology and protected species
- Earthworks and excavation
- Definition of materials and storage areas
- Contamination and pollution risk management
- Fuel containment
- Cultural heritage/archaeology
- Dust and emission control
- Noise and vibration control
- Working in or near watercourses

7.2.2 The list is not exhaustive and the Principal Contractor's Environment Manager onsite must highlight requirements for additional training, as the project progresses, to improve and add value to the overall site environmental awareness and compliance.

7.3 Toolbox Talks

7.3.1 The Principal Contractor and their subcontractors will conduct toolbox talks such that every employee receives a health, safety and environmental briefing as appropriate. For subcontractors, their supervisors are responsible for conducting these briefings and their implementation will be monitored by the Principal Contractor. Records must be kept of toolbox talks carried out, and who attended them. Requests for new/specific Toolbox Talks can be made to the Environment Manager.

7.3.2 Toolbox Talks will also be posted within common use areas such as welfare units and office reception areas. Key environmental issues linked to the programme will be targeted on the daily notice board as an aide memoir to all staff on site. For example, seasonal environmental constraints such as bird nesting season.

7.4 Environmental Competencies

7.4.1 The Principal Contractor will ensure all personnel conducting environmental tasks are suitably qualified and/or experienced for the roles and responsibilities that they are employed to undertake.

7.4.2 The Principal Contractor will monitor and record that all staff have attended the relevant environmental induction or training listed above (including updated or new training) prior to undertaking any activities on site. The Principal Contractor is required to develop criteria for evaluating the effectiveness of any training.