



Fair Isle Harbour Improvement Works

A.5 SWMP

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



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

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Document Control Sheet

Project Name: Fair Isle Harbour Improvement Works
Project Ref: 332511168
Report Title: Pre-Construction Site Waste Management Plan
Doc Ref: Version 1.0
Date: March 2023

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Revision	Date	Description	Prepared	Reviewed	Approved
1.0	XX		XX		
2.0	XX		XX		

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1 Introduction

1.1 Background

- 1.1.1 Stantec UK Limited (Stantec) has been appointed to produce a Pre-Construction Site Waste Management Plan (SWMP) to support a detailed planning application for the Fair Isle Ferry Replacement Project. The project aims to upgrade the berthing site at Fair Isle to facilitate the replacement of the existing vessel, which is approaching the end of its life and does not meet modern standards. The new vessel will be larger when compared to the existing vessel hence the new structure will be made to accommodate the increase in size.
- 1.1.2 The legal requirement to prepare a SWMP was removed in 2013. However, preparation of an SWMP is a policy requirement according to the Shetland Local Plan and considered best practice. This is to ensure building materials are managed efficiently, waste is disposed of legally, fly tipping is reduced, and materials reuse, recovery, and recycling are maximised.
- 1.1.3 Targets have been set in regard to waste generation from construction, demolition and excavation (CD&E). According to Scotland's Circular Economy Strategy (2010)¹ 70% of all waste must be recycled/composted or prepared for reuse by 2025. Additionally, up to a maximum of 5% of remaining waste can end up in landfill by 2025.
- 1.1.4 The developer, design team, and Principal Contractor will take responsibility for taking this Pre-construction SWMP and moving it into a 'live document' for the development of the project. The individuals responsible will make sure it is updated and monitored as required throughout the construction of the Proposed Development.
- 1.1.5 The SWMP will support incorporation of resource efficiency principles, including consideration of designing out CD&E waste, reuse, recycling, and recovery.

¹ Scotland's Zero Waste Plan - gov.scot (www.gov.scot)

1.2 Site Location

Fair Isle is an island located in Shetland, Northern Scotland between mainland Shetland and Orkney. The Fair Isle ferry berth is located within the harbour at North Haven, on the Northeast side of the island (**Figure 1-1** and **Figure 1-2**).

Figure 1-1: Map of Fair Isle focus on Fair Isle Harbour



Figure 1-2: Fair Isle Harbour²³



1.2.1 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.

² Noust: A boat-shaped hollow (sometimes with walls), where a boat is hauled up for winter storage.

³ Winch house: A mechanical device that can haul or lift vast amounts of weight- in this case to reel in or to let out the vessel

1.3 The Proposed Development

- 1.3.1 The Proposed Development will be designed to provide a reliable and lasting transport connection to Shetland. Shetland Island Council (SIC) is progressing the Project to replace the existing vessel, which is approaching the end of its life and does not meet modern standards.
- 1.3.2 The new structure includes the implementation of a linkspan service which would improve the operational safety of the infrastructure provided at Fair Isle and Grutness. It will also improve turnaround times associated with a roll-on roll-off (RoRo) service, along with continuation of current practice through responding to weather windows, and a faster and larger vessel to provide the potential for operation of an increased number of sailings.

1.4 Purpose of the Site Waste Management Plan

- 1.4.1 The purpose of this SWMP is to assist in ensuring that:
- The Proposed Development is compliant with all planning and waste management policy requirements relating to waste.
 - Opportunities for designing out waste are considered.
 - Construction, excavation and demolition materials are managed efficiently.
 - Waste generated is disposed of legally and fly tipping is reduced.
 - Materials reduction, reuse, recycling and recovery is maximised.
 - Developers' objectives relating to waste are met.
- 1.4.2 Matters relating to operational waste and waste servicing are not considered within the scope of this document.

2 Policy and Legislative Background

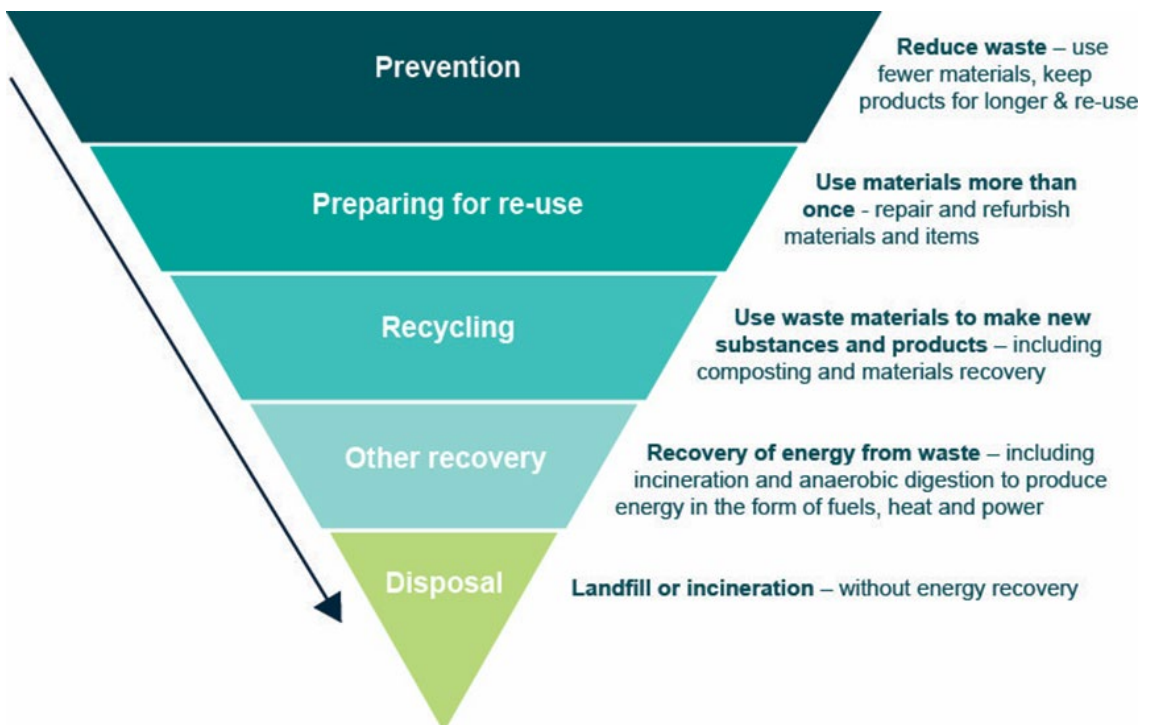
2.1 Introduction

2.1.1 This section provides a review of relevant policy and guidance in relation to construction waste to allow it to be appropriately considered within this SWMP.

2.2 European and National Policy Guidance

2.2.1 **The European Revised Waste Framework Directive (2008/98/EC)** amended May 2018, sets the framework for UK Waste Policy. The Waste Hierarchy (demonstrated in **Figure 2-1** below) runs throughout this policy and ranks waste management options according to best environmental option.

Figure 2-1: The Waste Hierarchy, Defra 2014



2.3 National Planning Policy, Strategy and Guidance

2.3.1 National Policy on waste management is defined in a series of policy documents, including but not limited to The Waste (Scotland) Regulations 2012. Similar themes are mirrored in the devolved Scotland's Zero Waste Plan (2010). National and devolved Government policy on waste is intended to protect human health and the environment by producing less waste and by using it as a resource wherever possible.

The Waste (Scotland) Regulations 2012 ⁴

- 2.3.2 The Scottish Government's Zero Waste Plan (published 2010) sets out the strategic direction for waste policy in Scotland over the decade. The aim of the Waste (Scotland) Regulation is to deliver three key action points within the Zero Waste Plan, which will also assist with progress in achieving aims of the waste hierarchy.
1. The Scottish Government will introduce progressive bans on the types of materials that may be disposed of in landfill, and associated support measures, to ensure that no resources with a value for reuse or recycling are sent to landfill by 2020. (Action 4).
 2. To support the introduction of landfill bans, the Scottish Government will introduce regulations to drive separate collection and treatment of a range of resources in order to maximise their reuse and recycling value and generate market supply. The initial focus will be on separate collection of food waste, in order to recover its material and energy value and avoid contamination of other waste materials. (Action 8).
 3. The Scottish Government will introduce regulatory measures to support the delivery of landfill bans, by ensuring energy from waste treatment is only used to recover value from resources that cannot offer greater environmental and economic benefits through reuse or recycling. These measures will supersede the current 25% cap which currently applies only to municipal waste and are likely to result in similar amounts of resources being available for energy from waste treatment. (Action 14).

The Waste Management Licensing (Scotland) Regulations 2011

- 2.3.3 The regulations specifically ensures that waste is recovered without endangering human health and without using processes or methods which could harm the environment and in particular without:
- Risk to water, air, soil, plants or animals; or
 - Causing nuisance through noise or odours; or
 - Adversely affecting the countryside or places of special interest.

Scotland Planning Policy 2014 ⁵

- 2.3.4 The Scottish Planning Policy (SPP) was published in June 2014, the most recent 2020 update was removed due to a legal challenge in August 2021. The SPP is a statement of Scottish Government policy on how nationally important land use planning matters should be addressed across the country. Currently the SPP has no statutory status.
- 2.3.5 The purpose of the SPP is to set out national planning policies which reflect Scottish Ministers' priorities for operation of the planning system and for the development and use of land. The SPP promotes consistency in the application of policy across Scotland whilst allowing sufficient flexibility to reflect local circumstances. It directly relates to:
- The preparation of development plans;
 - The design of development, from initial concept through to delivery; and
 - The determination of planning applications and appeals.

⁴ [The Waste \(Scotland\) Regulations 2012 \(parliament.scot\)](https://www.parliament.scot/legislation/2012/01/01/waste-scotland-regulations-2012)

⁵ [Adoption of Scottish planning policy in local development plans: research - gov.scot \(www.gov.scot\)](https://www.gov.scot/research/publications/2014/01/01/adoption-of-scottish-planning-policy-in-local-development-plans-research-gov-scot)

Scotland zero waste plan (published 2010) ⁶

- 2.3.6 The plan states that the Scottish Government aimed to secure 70% recycling of construction and demolition waste by 2020.
- 2.3.7 Currently, the plan aims for 70% recycling and maximum 5% to landfill for all waste in Scotland by 2025.

Soils sector legislation (Scotland)

- 2.3.8 Waste generation during the construction phase is likely to result from enlargement of the noust which will generate a large volume of rock and soil. However, no one legislative or policy tool has been developed specifically with the protection of soil in mind. Where policy or legislation does relate to soil, the extent is generally limited to the protection of a specific impact or function of that soil.
- 2.3.9 The Scottish Soil Framework (2009)⁷ has been developed with the aim of promoting the sustainable management and protection of soils consistent with the economic, social and environmental needs of Scotland.
- 2.3.10 The Framework identifies a wide range of activities that contribute to 13 soil outcomes:
- SO1 - Soil organic matter stock protected and enhanced where appropriate.
 - SO2 - Soil erosion reduced and where possible remediated.
 - SO3 - Soil structure maintained.
 - SO4 - Greenhouse gas emission from soils reduced to optimum balance.
 - SO5 - Soil biodiversity, as well as above ground biodiversity, protected.
 - SO6 - Soils making a positive contribution to sustainable flood management.
 - SO7 - Water quality enhanced through improved soil management.
 - SO8 - Soil's productive capacity to produce food, timber and other biomass maintained and enhanced.
 - SO9 - Soil contamination reduced.
 - SO10 - Reduced pressure on soils by using brownfield sites in preference to greenfield.
 - SO11 - Soils with significant historical and cultural features protected.
 - SO12 - Knowledge and understanding of soils enhanced, evidence base for policy review and development strengthened.
 - SO13 - Effective coordination of all stakeholders' roles, responsibilities, and actions.

⁶ [Waste Management In Scotland: The Zero Waste Management Plan | Ivory Research](#)

⁷ [The Scottish Soil Framework - gov.scot \(www.gov.scot\)](#)

2.4 Local Planning Policy and Strategy

Shetland Local Development (adopted in 2014)

- 2.4.1 Shetland Island Council (SIC) is the statutory Planning Authority for the area of Fair Isle.
- 2.4.2 The local development plan in Fair Isle comprises the Local Plan (2014-2034), which was adopted in September 2014.
- 2.4.3 Within the Local Development Plan (2014-2034) land use planning can assist in achieving the Shetland Resolution through the W5 Waste Management Plans and facilities in all new developments, where:
- Developers must submit an appropriate Site Waste Management Plan (SWMP), which demonstrates how waste generated by the development during the construction phase will be dealt with, in accordance with the waste hierarchy, including how the materials will be reused, recycled and how remaining waste will be disposed of.
 - Adequate space provision for storage, collection and appropriate recycling facilities for all waste arising from the development.

3 Site Waste Management Plan Process

3.1 Site Waste Management Plan Stages

- 3.1.1 The construction waste management process can be split into three management stages as follows:
- Stage One: Pre-construction;
 - Stage Two: Construction Phase; and
 - Stage Three: Post Construction Review.
- 3.1.2 Stage One ensures that early consideration is given to the waste management implications and requirements of a Proposed Development. It may also assist in identifying opportunities to further reduce waste through project design ahead of the construction phase. This document provides the Stage One, Pre-Construction SWMP.
- 3.1.3 During Stage Two, a construction phase SWMP will be further developed as specific details become available such as any requirements from the contractor in relation to waste, identification of specific building materials to be used and establishment of the construction programme. The principles set out in this pre-construction SWMP will be used to inform the construction phase SWMP which will be managed and updated as necessary throughout the construction process by the contractor.
- 3.1.4 The Stage Two construction phase SWMP will be developed in consultation with SIC and will be submitted for consideration and comment prior to the commencement of excavation, demolition and construction works for the Proposed Development.
- 3.1.5 Post-construction, at Stage Three, there will be a review exercise to acknowledge adherence, or otherwise, to the principles as set out in the previous stages of the SWMP.
- 3.1.6 It must be noted that the setting of waste avoidance targets will be the subject of commercial discussions with the main contractor at the point of procurement and is not the role of this Plan.

4 Waste Arisings

4.1 Introduction

- 4.1.1 This section sets out the waste management principles that should be followed during the construction, excavation, and demolition phase of the Proposed Development.
- 4.1.2 During the construction phase, a small area would be required for a temporary construction compound (“the laydown area”) for the potential storage of materials, plant and equipment as well as providing site welfare.
- 4.1.3 The current site uses are likely to be producing very low levels of operational waste.
- 4.1.4 Materials that arise from activities on site such as breaking out the masonry if suitable will be added into the linkspan as backfill. However, some waste that arises from the demolition of the winch house will be transported offsite via the North Sea and will be considered in the First Iteration Environmental Management Plan (FiEMP) included within the application.

4.2 Principles of Construction Waste Management

- 4.2.1 This section of the Plan introduces the principles of ‘best practice’ waste management.
- 4.2.2 Overall, the hierarchy of waste management will be adopted, in accordance with national policy requirements (**Figure 2-1**). The waste management methods in order of preference are:
- **Waste Prevention** – through good design and procurement mechanisms;
 - **Preparation for Reuse** – to provide innovative design features to the Proposed Development to use materials in their current state and form (for example reuse of soils), this can occur either on or off site. The scale of the Site lends itself to store materials and manage construction so that vehicle movements off-site can be minimised. For example, if appropriate, areas for temporary stockpiling of material will be assigned. Any storage and reuse of materials would be strictly inline, where appropriate, with provisions in the FiEMP relating to managing contaminated materials.
 - **Material Recovery** – by using waste materials found on the Site and recycling/recovering them into an alternative form that can be used for any construction purposes (for example crushing concrete for road construction material). By recycling on-site, carbon emissions associated with the Proposed Development are reduced, rather than materials being taken away from the application Site;
 - **Other Recovery** – energy recovery from biodegradable or combustible materials; and
 - **Disposal** – the least preferred option where the waste stream would be subject to a final disposal route, such as landfill.

4.3 Targets

- 4.3.1 Achieving sustainable waste management during the construction of developments is crucial to the delivery of the Scotland Zero Waste Plan (adopted June 2010). The Zero Waste Plan is a national plan that proposes to increase resource efficiency and waste prevention in order to reduce the amount of municipal and commercial waste. The waste and recycling targets set are as follows:
- Long-term targets of recycling 70% of all Scotland’s waste by 2025.
 - Only 5% of remaining waste ending up in landfill by 2025.

4.4 Estimated Waste Arisings

Demolition Waste

- 4.4.1 There are no significant demolition works expected as majority of the existing harbour is to be retained, where only some elements will be removed. The winch house is to be demolished as it does not meet modern standards. Materials from the winch house demolition include bricks, concrete, timber, inert materials (glass), metals (including steel) and some amount of plastics. The quantities of each of these materials are unknown at this time. The demolition waste will be transported off the island and will be dealt with in line with the local waste regulations.

Figure 4-1: The existing winch house on site



Excavation Waste

- 4.4.2 The enlargement of the noust require intrusive grounds works on site and dredging is required within the harbour to allow for the new vessel (**Table 4-1 and Table 4-2**). Materials excavated during construction is to be processed for use in the works wherever possible to reduce the amount of material disposed by re-use the materials on site. Currently, discussions on disposal of dredged sediment and rock arising with Marine Scotland are ongoing.

Table 4-1: Breakdown of estimated excavation waste from the Fair Isle site.

Estimated Material Arising from Excavation	Quantity
Rock arisings from the noust	15,440 m ³
Backfill volume required for Fair Isle quay	9,600 m ³
Seabed deposits overlying rockhead	0.5 m

*15% contingency to be applied due to the way estimated.**

Table 4-2: Breakdown of estimated waste from dredging

Estimated Material Arising from Dredging	Quantity
Seabed deposits	1,163 m ³
Rock	1,320 m ³
Total dredge estimate	2,483 m³

*15% contingency to be applied due to the way estimated.**

Construction Waste

- 4.4.3 Waste generation during the construction phase is likely to result from enlargement of the noust which will generate a large volume of rock, estimated to be 15,444m³. There are ongoing discussions regarding the disposal of dredged sediment and rock arising with Marine Scotland, but it is expected that the rock may be disposed of either at sea or on land.
- 4.4.4 Concrete, hardstanding and other materials are expected to be excavated to enable the development of foundations.
- 4.4.5 Construction waste expected to be generated by the proposed development includes non-hazardous construction materials such as off-cuts of timber, bricks, wire, fibreglass, cleaning cloths, paper, materials packaging and similar materials.
- 4.4.6 Any waste that is generated will be managed in accordance with national and local policy, looking to reduce, reuse and recycle whenever possible. Such measures will ensure that the volume of waste likely to be generated by the Proposed Development during construction will be limited and will not significantly affect the capacity of local waste infrastructure. Any waste that is generated will be transported off the island and will be managed in accordance with local waste regulations.

5 Roles and Responsibilities

5.1 Introduction

- 5.1.1 This section sets out the roles and responsibilities of the project team members in relation to waste management.
- 5.1.2 The purpose of setting out responsibilities within this SWMP is to identify individuals to deliver certain aspects of the SWMP.

5.2 Roles and Responsibilities

The Applicant

- 5.2.1 Shetland Islands Council (SIC) are responsible for developing the overarching construction site and waste management strategy for Fair Isle, and for preparing this Pre-construction SWMP to accompany the planning application.
- 5.2.2 The developer will ensure that all contractors engaged in the project have an obligation to reduce the quantity of waste likely to arise from the Proposed Development, and to ensure any waste that does arise is managed in the appropriate manner.
- 5.2.3 The developer is responsible for providing reasonable direction to any contractors and, in collaboration with the Principal Contractor, for the review and revision of the SWMP as necessary.

Design Team

- 5.2.4 The design team will be responsible for reducing the quantity of waste likely to arise from the development through the design process. The design team will consider the Waste Hierarchy, to optimise reuse, recycling and recovery opportunities for the purpose of minimising waste as far as possible.

Principal Contractor

- 5.2.5 The Principal Contractor (once appointed), will be responsible for the following:
- Identifying specific individual(s) (by name or job title) responsible for implementing the SWMP;
 - Implementing the SWMP during the construction phase of the Proposed Development. This includes responsibility for co-ordinating the management of all onsite waste streams, and the overall segregation, storage and collection of waste;
 - Ensuring that waste produced during construction is reused, recycled, and recovered, as far as reasonably practicable;
 - Keeping all waste management duty of care documentation and, in collaboration with the developer, for making any necessary updates to the SWMP and associated records;
 - Fulfilling waste management duty of care requirements and ensuring the lawful disposal of 'Directive Waste' (along with the appointed waste transfer company(ies) and the receiving waste site).
 - Ensuring that any sub-contractors are aware of and follow the procedures necessary to be compliant with the SWMP.

- Ensuring that all onsite employees, including those of sub-contractors, are provided with appropriate training to understand the requirements of the SWMP.
- Appointing a person(s) responsible for regularly checking compliance with the SWMP – this may be The Waste Champion or an Environmental Clerks of Works.

Procurement

- 5.2.6 The person(s) responsible for the procurement of materials (who may be an employee of the Principal Contractor) will be responsible for, where possible, procuring materials that contain recycled content, have low or no packaging, and are purchased from suppliers that have a “buy-back” strategy for unused material.
- 5.2.7 All material suppliers should, where possible, have certified environmental standards.
- 5.2.8 The person(s) responsible for the procurement of services (who may be an employee of the Principal Contractor) will be responsible for appointing waste management contractors that are suitably licenced and are compliant with duty of care obligations.

Sub-contractors

- 5.2.9 Any sub-contractors will be responsible for compliance with the SWMP in use by the Principal Contractor and may be required to produce their own waste management documentation as necessary.

6 Monitoring and Reviewing

6.1 Monitoring

- 6.1.1 The waste generated during the project should be recorded and monitored by the Principal Contractor. The example template provided in **Appendix A** can be used, although alternative compliant formats are acceptable.
- 6.1.2 The volume/tonnage of waste generated (or sent off site), as well as the percentage or volume/tonnage reused, recycled or disposed will be recorded throughout the construction phase.
- 6.1.3 Duty of Care documents will be retained and kept with the SWMP documentation on site by the Principal Contractor.
- 6.1.4 Where waste data is obtained from licensed external waste contractors, the data needs to be reliable and verifiable.

6.2 Reviewing

- 6.2.1 Both the SIC Project Team and the Principal Contractor are responsible for ensuring that the SWMP is reviewed and updated accordingly at regular intervals, and as necessary throughout the construction phase. The Principal Contractor will provide a monthly report to the SIC Project Team on the progress of the SWMP.

Appendix A Example Monitoring Templates

Duty of Care Documentation

Waste Type in Skip	EWC Code	Inert/Non-Hazardous/Hazardous	Waste Carrier Name (and/or broker name)	Waste Carrier License Number	License Expiry Date	Name of End Destination	Landfill License or Waste Transfer Station Registration Details	Volume Sent	Confirmation that Registered Landfill received Waste and Date	
Waste Activity License/Exemption			Details of License/Exemption (including expiry date and limitations to license)				Comments			

Useful Waste Catalogue Codes

Waste Material	EWC
Bricks	17-01-02
Concrete	07-01-01
Contaminated rags/cloths/wipes	15-02-02*
Contaminated spill materials	15-02-02*
Fluorescent Tubes (FT)	20-01-21*
Mixed Municipal Waste	20-03-01
Glass	17-02-02
Mixed Metals	17-04-07
Paper and Cardboard	20-01-01
Plasterboard	17-08-02
Plastics	17-02-03
Soil & Sands not containing dangerous substances	17-05-04
Wood	17-02-01