ATLANTIC58

SUPPLEMENTARY ENVIRONMENTAL INFORMATION:

ROSSLYN PIER UPGRADE

Tanera Mor, Summer Isles

Summer Isles Enterprises Ltd

04 August 2023

Supplementary Environmental Information:
Rosslyn Pier Upgrade
Tanera Mor, Summer Isles

for Summer Isles Enterprises Ltd

04 August 2023

Version 1

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PROJECT TEAM:

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1 INTRODUCTION

Summer Isles Enterprises Ltd (SIE) proposes to complete emergency repair works at Rosslyn Pier within Tanera Mor on the Summer Isles to enable the regular berthing of three vessels and provide vehicle access at all levels of the tide. This document has been collated to set out the key sensitivities and potential impacts associated with the upgrade works to Rosslyn Pier, Summer Isles. The document provides the information requested under Section 5(i) of the Marine Licence Application. In addition, the following supporting documents are referenced, which form part of the Marine License application:

- Rosslyn Pier Repair Works Method Statement V1.0
- Appendix 1 - Information to Inform a Habitat Regulations Appraisal V1.0
- Appendix 2 - Otter Survey Report V1.0
- Drawing 237004-105
- Drawing 237004-104

2 BASELINE ASSESSMENT

2.1.1 Designations

The development falls within the designations set out in Table 1. In addition, there is potential connectivity with European Sites designated under Conservation (Natural Habitats, &c.) Regulations 1994 as amended. These are considered in a separate report: *Appendix 1 - Information to Inform a Habitats Regulations Appraisal*.

Table 1 Summary of relevant designations

Site	Designation	Description	Distance from development
Inner Hebrides and the Minches[1]	SAC	Designated to protect harbour porpoise, providing protection to approximately 32% of the harbour porpoise population on the west coast of Scotland, containing the highest density of harbour porpoise in Scotland.	Adjacent / within
Wester Ross[2]	MPA (NC)	Protected features include burrowed mud; circalittoral muddy sand communities; flame shell beds; kelp and seaweed communities on sublittoral sediment; maerl beds; maerl or coarse shell gravel with burrowing sea cucumbers; northern feather star aggregations on mixed substrata. Seabed Fluid and Gas Seep. Submarine Mass Movement; Quaternary of Scotland	Within

[1] NatureScot. 2020. Conservation and Management Advice: Inner Hebrides and the Minches SAC 2020.

[2] https://sitelink.nature.scot/site/10421

Wester Ross	Biosphere Reserve	Non statutory designation displays a suite of habitats primarily influenced by upland and oceanic factors. Most of Wester Ross is covered by open heathland, bare rock, scree, and wet grassland with scattered bogs and peat lands. Of national interest are two variants of dwarf shrub heath and a western variant of moss heath.	Within / Adjacent

2.1.2 Protected Species and Habitats

- Otter - Otter is a European Protected Species and is fully protected under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). It is also classified as a Priority Marine Feature and is listed on the Scottish Biodiversity List. A full otter survey was undertaken at the site (and 200 m buffer) on 13 June 2023. Survey findings indicated extensive evidence of otter use across the area. The absence of fresh spraint, and high frequency of aged / dried spraint in association with an inactive potential resting place ([Redacted] suggest that habitat use by otter may have reduced relatively recently, potentially in combination with the disused resting place location.
- Priority Marine Features (PMFs) – a search of PMFs was undertaken on the Geodatabase of Marine features adjacent to Scotland (GeMS). This collation of species and habitat records provides information on the known recorded distribution of Scottish Priority Marine Features (PMFs), and Annex I habitats in the marine environment. The closest PMF recorded is 200 m from the site and represents a range of biotopes (kelp and seaweed communities on sublittoral sediments, *Laminaria saccharina* forest on very sheltered upper infralittoral rock and infralittoral muddy sand).
- Other (mobile) marine species – a search of the National Biodiversity Network atlas returned records of Minke whale (*Balaenoptera acutostata*), common dolphin (*Delphinus delphis*), grey seal (*Halichoerus grypus*), harbour seal (*Phoca vitulina*) and common / harbour porpoise (*Phocoena phocoena*).

2.1.3 Other Relevant Activities

An operational marine fish farm (Tanera) operated by Scottish Seafarms is located approximately 350 m north of the site.

3 DESCRIPTION OF ACTIVITIES

3.1 RATIONALE

SIE is progressing a range of development initiatives across the island as part of a plan to enhance hospitality and tourism facilities. Development is ongoing within the island and new paths, building improvements and restorations are planned or under construction across the island. Rosslyn Pier is a key access point for the island for construction workers, staff, volunteers and guests. In addition, the pier is the only access point, which is accessible during all tidal states, and represents the primary point of access for maritime emergency services. Recent engineering inspections indicated evidence of severe structural instability, which poses an immediate safety risk, and emergency remedial works are required to enable ongoing development activities and access to the island.

3.1.1 Current Development

The structure currently comprises of a 35 m concrete and stonework pier with a temporary gravel berm supporting the existing stonework. Survey results of engineering inspections recorded several badly cracked areas, noticeable outward movement of a wall face, missing stones and pointing, and scour/abrasion of rock. The deck slab is also in poor condition with numerous cracks and damaged areas. Details of the existing pier are provided in Drawing 237004-104. The current development comprises of the pier structure, an associated boathouse, access track and associated entertainment space (Figure 1).

3.2 PROPOSED WORKS

A full method statement is provided in *Rosslyn Pier Repair Works Method Statement V1.0* and summarised below in the context of works below MHWS and above MHWS. In addition, Drawing 237004-104 describes the existing pier and Drawing 237004-105 illustrates the proposed works.

3.2.1 Works below MHWS

The works relate to the southeast wall of the pier structure only.

Preparatory Works

Silt curtains, also known as turbidity curtains or sediment curtains, are currently installed at the site (see *Rosslyn Pier Repair Works Method Statement V1*). Works will be scheduled to align with low tide cycles. The existing gravel berm (illustrated in Drawing 237004-105 will be removed (approximately 200 t) from the upper area of the pier structure with an excavator / digger. Marine growth and loose material from pier masonry will be cleaned with a high-pressure washer. Following preparation works, a full inspection of the pier will be carried out to identify areas of soft material, soft material will be excavated out.

Construction Works

- Repointing the pier –application of mortar mix to joints to cure and attain the required strength.
- Construction of a concrete berm / infill of undermined areas –temporary timber shuttering (marine plywood) will be erected and sealed using the appropriate foam and supported by sandbags to allow a mass concrete foundation to be poured. Dowels (material) in an injectable resin will be drilled or placed into the structure to pin infill concrete to the existing structure. Rapid set marine grade concrete (RC32, exposure class XS2[3]) will be used for all works below MHWS to infill the undermined areas of the pier and create a berm / step along the face of the pier. Approximately 18m^2 of concrete will be poured into the timber shuttering in defined phases to ensure proper consolidation, compaction and setting prior to inundation with seawater at higher tides. Drawing 237004-105 indicates the nature and extent of works proposed for the main pier repair works.

3.2.2 Works above MHWS

- Concrete capping slab – a concrete cap will be applied atop the pier structure. Timber formwork will be erected to create the desired shape and dimensions of the new concrete slab. Steel reinforcement bars will be set within the formwork to provide structural strength and stability to the new slab. A suitable mix of marine grade, rapid set concrete will be poured within the formwork. The slab will be protected from adverse weather conditions, excessive drying, and potential

[3]https://www.bsigroup.com/en-GB/industries-and-sectors/construction-and-building/bs-8500-concrete-complementary-british-standard-to-bs-en-206/

damage during the initial curing period using coverings, barriers, or other protective measures. Concrete will be vibrated with a handheld tools to remove air and facilitate levelling. Regular inspections and quality checks will be undertaken during the construction process to ensure compliance with design specifications and industry standards.

Silt screens are currently positioned around the perimeter of the works to prevent any sediment entering the water column from dispersing outwith the site boundary. Minor masonry drilling requirements (for dowel installation) and concrete vibration (for expulsion of air bubbles) will be undertaken using handheld tools. No major acoustic disturbance blasting, deterrents or piling activities are expected.

3.2.3 Material Movements

Materials will be imported to site. The concrete will be mixed at a separate location on the island, at a separate facility on the island (Dutch Barn/ Paddock, approximately 100 m from the pier) where it will be transported to site via a small ready mix concrete truck.

3.2.4 Timescale and Duration

The works are timed for completion as soon as the marine licence is issued, the developer has an aspirational timescale to initiate work as of mid-August 2023 or mid-September 2023. The duration of the works are as follows:

- Works below MHWS – two x 2-week phases of development to align with tidal cycles.
- Works below MHWS – one x 1-week phases of development to align with tidal cycles.

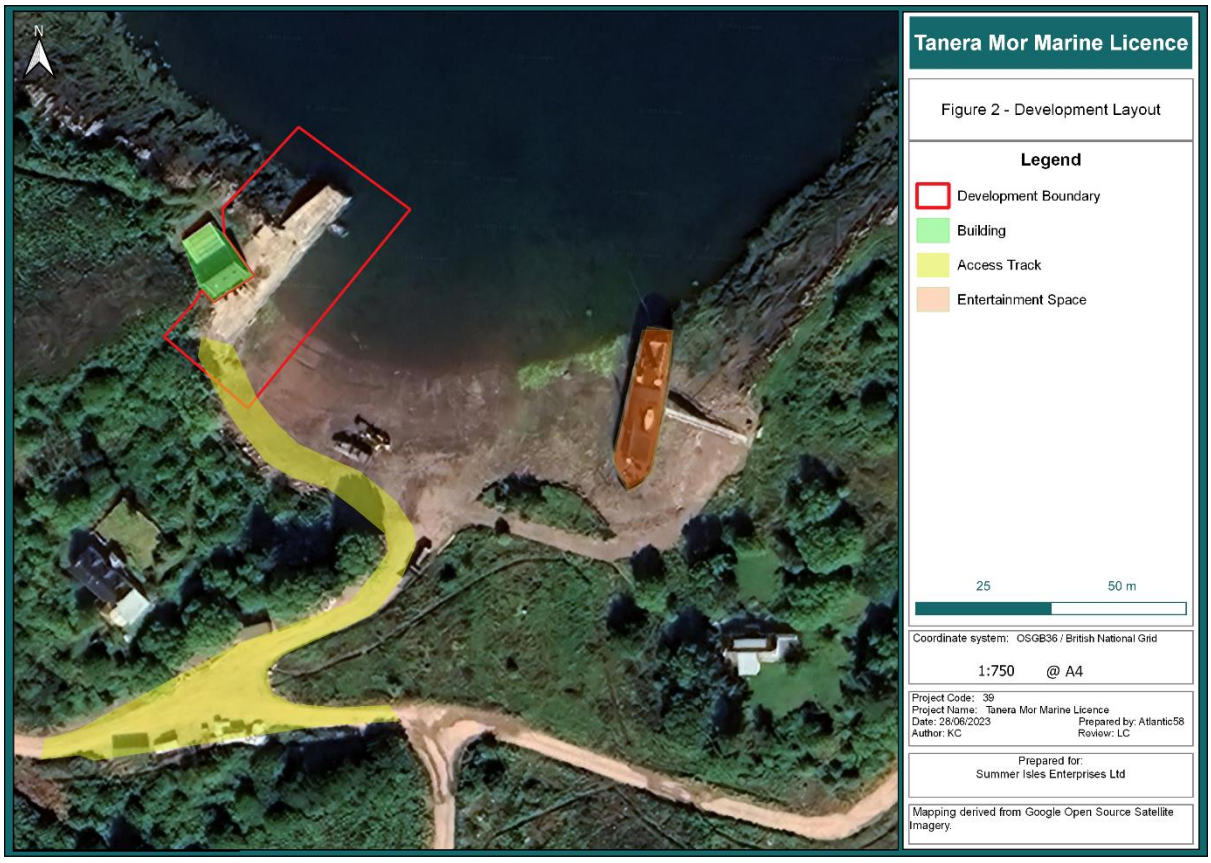

Figure 1 Development Layout

4 POTENTIAL IMPACTS

Key impacts arising from the proposed development are set out below:

4.1 CONSTRUCTION

- Sedimentation of marine waters arising from removal of gravel material and excavation of soft material or seabed substate during preparatory works.
- Chemical pollution of marine waters from spillages of poured concrete arising from infill / berm construction or spillages from concrete cap construction.
- Disturbance and / or displacement of harbour porpoise and other mobile marine fauna.
- Disturbance and / or displacement of otter.

4.2 OPERATION

The upgrade works are expected to restore the existing pier to the original operational use. No further impacts arising from the operational phase are anticipated.

4.3 IMPACTS SCOPED OUT

Habitat removal from excavation of the seabed and installation of concrete infill / berm has been scoped out. The infill operations are limited to the undermined / damaged areas of the existing pier structure and will extend out by a minimal distance to form a discrete 'step / berm'.

Chemical pollution of marine waters from fuels, oils, curing compounds associated with plant / vessel operations are not expected to be significant. The works are of a relatively small scale with associated minor plant requirements. All construction materials, including aggregates, cement, and reinforcing steel, will be stored in designated areas away from the pier edge to prevent accidental displacement or runoff into the sea.

5 IMPACT ASSSSMENT

5.1.1 Sedimentation of marine waters arising from removal of gravel material and excavation of soft material or seabed substate during preparatory works.

Receptors

Potential receptors:

- Operational marine fish farm (Tanera)
- Protected species: otter, harbour porpoise
- Designated sites:
  - Inner Hebrides and Minches SAC
  - Wester Ross MPA

Impact

Sedimentation of marine waters arising from removal of gravel material and excavation of soft material or seabed substate during preparatory works may reduce water quality, impacting habitat and prey availability for protected species and degrading marine habitats. Sedimentation may also impact fish welfare of Atlantic salmon from the neighbouring fish farm operated by Scottish Sea Farms (Tanera).

Magnitude and Mitigations

Silt screens are currently positioned around the perimeter of the works to prevent any sediment entering the water column from dispersing outwith the site boundary.

5.1.2 Chemical pollution of marine waters from spillages of poured concrete arising from infill / berm construction or spillages from concrete cap construction.

Receptors

Potential receptors:

- Operational marine fish farm (Tanera)
- Protected species: otter, harbour porpoise
- Designated sites:
  - Inner Hebrides and Minches SAC
  - Wester Ross MPA

Impact

Chemical pollution of marine waters may occur from spillages of poured concrete from the berm/ infill and cap installation. Spillages may occur from poor shuttering / formwork leaking concrete into the surrounding environment or spillages from pouring operations.

Magnitude and Mitigations

Formwork will be sealed with foam to remove potential for leakage of liquid concrete. Rapid set marine grade concrete (RC32, exposure class XS2[4]) will be used for all works below MHWS, removing the potential for dispersion into the marine environment following inundation with seawater. All concrete mixing activities will be conducted at an off-site facility, away from the immediate proximity of the pier and marine environment. Concrete will then be transported to work area using portable units, minimising the potential for on-site spills or accidental discharge of concrete materials into the water. Small spillages of concrete are expected to be manually removed. Whilst not specified for large scale concrete spillages, silt screens are currently positioned around the perimeter of the works and would have a preventative function in terms of accidental spillages of large volumes of concrete.

5.1.3 Disturbance / displacement of harbour porpoise

Receptors

- Protected species (harbour porpoise)
- Designated sites: Inner Hebrides and Minches SAC

Impact

Displacement arising from disturbance (visual and noise) from construction activities and vessel movements has the potential to cause disturbance to harbour porpoise, otter and other protected species that may be foraging or socialising in the area.

Magnitude and Mitigation

The project site is already located at an established pier location, which is the primary access point to Tanera Mor, and is associated with a high level of existing activity from vessel movements for construction workers and fishing activities, SIE employees and visitors to the island. Harbour porpoise are likely to

[4]https://www.bsigroup.com/en-GB/industries-and-sectors/construction-and-building/bs-8500-concrete-complementary-british-standard-to-bs-en-206/

tolerate short term disturbance from construction activities given to the regular movement and berthing of vessels around the island. Masonry drilling and concrete vibration will be carried out using typical handheld tools and no excessive noise from construction will be generated (blasting, piling or acoustic deterrents).

Construction is anticipated to start in September / October. This does not overlap with the harbour porpoise breeding season (June to August) and is unlikely to have an adverse effect on breeding.

5.1.4 Noise and visual disturbance to otter resulting in displacement from habitat.

Receptor

- Protected species: otter
- Designated sites: Inverpolly SAC

Impact

Otter may use the coastal area for breeding, foraging and commuting. Noise and visual disturbance may displace otter from foraging, commuting, or breeding areas.

Magnitude and mitigation

The project site is already located at an established pier location, which is the primary access point to Tanera Mor, and is associated with a high level of existing activity from vessel movements for construction workers and fishing activities, SIE employees, entertainment facility and visitors to the island.

Survey findings indicated extensive evidence of otter use of the across the area, however the absence of fresh spraint, and high frequency of aged / dried spraint in association with an inactive potential resting place suggests that habitat use by otter may have reduced relatively recently, potentially in combination with the disused resting place location approximately [Redacted]

While there is a small potential for disturbance to otter within 200 m, this applies to breeding otter only and no signs were found in the survey area. The area has relatively high levels of existing activity and the proposed works are relatively small in scale, with no specialist plant / equipment requirements or blasting and drilling. Disturbance to otter resulting in displacement is not anticipated based on current activity levels and nature / duration of proposed works.

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