

MOWI SCOTLAND LTD

CARRADALE HARBOUR PONTOON & DREDGE



MARINE LICENCE APPLICATION
SUPPORTING DOCUMENT

**MOWI Scotland
Farms Office
Glen Nevis Business Park
Fort William
PH33 6XR**

**Wallace Stone
Suite 21
Templeton House
62 Templeton Street
Glasgow
G40 1DA**

**Tel: 0141 554 8233
Fax: 0141 554 4727**

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This document was prepared as follows:-

	Name	Signature	Date
Prepared By	Jamie Arnott	<Redacted>	11/07/2024
Checked By	Gordon Brown	<Redacted>	12/08/2024
Approved By	Gordon Brown	<Redacted>	12/08/2024

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1. INTRODUCTION

As part of the Carradale Harbour Pontoon project, two Marine Licence applications are required: ‘Construction’ and ‘Dredging & Sea Disposal’. The applications will be submitted by Wallace Stone on behalf of MOWI Scotland Ltd.

In addition, a Best Practicable Environmental Option (BPEO) report has been produced to consider the most appropriate means of disposing of the dredge spoil. The BPEO is submitted in addition to this Supporting Document as part of the Dredge and Disposal Marine Licence Application.

The purpose of this Supporting Document is to provide supporting information to the marine licence application process. It includes details of the proposed project, including the works associated with installation of the proposed pontoon and dredging within the Harbour. In accordance with Marine Scotland’s Marine Licence Application, it is important to consider the application with reference to Scotland’s National Marine Plan (SNMP). This document outlines the SNMP policies and describes the potential interactions and alignment of the proposed works with the SNMP. The report considers potential environmental impacts and details mitigation measures to reduce potential negative environmental effects.

2. PROJECT DESCRIPTION

Carradale Harbour is located on the east side of the Kintyre peninsula which lies on Scotland's west coast (Grid Reference NR 81924 38664).

MOWI Scotland Ltd. plan to install a pontoon within Carradale Harbour for shared use by MOWI for commercial activities and private use by the local community. Argyll & Bute Council are the Statutory Harbour Authority (SHA) for Carradale Harbour and are therefore responsible for its management and maintenance.

The proposed works will include installation of 4No. 8mx2.5m prefabricated pontoon units which will be held in place by 2No. tubular steel guide piles. The pontoons will be accessed from the existing quayside via a 20m long access bridge. A critical part of the works will involve dredging of the seabed in an area around the proposed pontoons to provide suitable water depths and ensure the pontoons do not ground. The dredge material will be disposed of at the licenced disposal site in Campbeltown (MA060).

2.1 Methodology

The dredging operation within the harbour will most likely utilise a backhoe dredger on a stationary vessel. A split-hopper barge or equivalent bottom opening vessel will be utilised, so that dredge material can be released from the bottom of the vessel at the licenced disposal site. Dredging operations within the Harbour will require to be carefully planned and strictly controlled, to ensure no interference with the vessels using the Harbour. Exact details of the dredging methodology will be confirmed once a dredge Contractor has been appointed.

Marine piling plant will undertake the installation of steel tubular guide piles which will be driven into the seabed and socketed to rockhead. After installation of the piling, the prefabricated pontoon sections will be lifted into the water by crane sitting on the adjacent quayside. The pontoons will then be connected to the new guide piles. The pontoon access bridge will be lifted into position using a crane and connected to a frame on the existing quay structure.

2.2 Proposed programme

The works are expected to take 3 months to complete, with no night-time working anticipated. The works programme has not yet been confirmed, however, the start date is estimated to be the 11th November 2024.

3. MARINE PLAN ASSESSMENT

As the proposed works will be undertaken below Mean High Water Springs (MHWS) and within 12 nautical miles of the Scottish Coastline, the project falls within the remit of the Marine (Scotland) Act 2010. The 2015 Scottish National Marine Plan (SNMP) covering inshore waters is a requirement of the Act. The SNMP lays out the Scottish Minister’s policies for the sustainable development of Scotland’s seas and provides General Planning Principles (GENs). The proposed works have been reviewed against SNMP policies to determine how the works have considered SNMP (see Table 1).

Table 1 - Proposals reviewed against Scotland's National Marine Plan

General Planning Principles	Policy Text/Requirements	Carradale Harbour Pontoon & Dredge Considerations
GEN 2: Economic Benefits	Sustainable development and use which provides economic benefit to Scottish communities is encouraged when consistent with the objectives and policies of this Plan.	The proposed works form part of MOWI’s plans to expand their operations in Carradale. MOWI plans to invest in Carradale Harbour which will help stimulate economic growth and improve local amenities. MOWI have been part of the Carradale community for the past 10 years, directly employing 12 people. The Harbour is a multi-user facility, which is utilised by both commercial and recreational vessels. MOWI will use the proposed pontoon for their own commercial activities, whilst also permitting the local community to use the berths recreationally which will provide safer means of access. The dredge works will improve safe navigational access within the harbour for other commercial and recreational vessels operating from the harbour.

<p>GEN 3: Social Benefits</p>	<p>Sustainable development and use which provides social benefits is encouraged when consistent with the objectives and policies of this Plan.</p>	<p>As per GEN 2 [Investment + shared use + employment]</p>
<p>GEN 4: Co-Existence</p>	<p>Proposals which enable coexistence with other development sectors and activities within the Scottish marine area are encouraged in planning and decision making processes, when consistent with policies and objectives of this Plan.</p>	<p>As per GEN 2 [Shared use + improved navigation]</p>
<p>GEN 6: Historic Environment</p>	<p>Development and use of the marine environment should protect and, where appropriate, enhance heritage assets in a manner proportionate to their significance.</p>	<p>Fishing has been a main activity in Carradale since the 17th century, with the communities first pier being constructed in 1858. The current pier was constructed circa 2006, therefore although the harbour itself has significant history, the structure from which the proposed pontoon will be accessed is of modern construction and there will be no impact on the historic environment. The proposed pontoon will ensure the harbour and the community continues to benefit from the fishing industry as it has done since the 17th century.</p>
<p>GEN 7: Landscape / Seascape</p>	<p>Marine planners and decision makers should ensure that development and use of the marine environment take seascape, landscape and visual impacts into account.</p>	<p>Installation of the proposed works will have minimal visual impact on the existing landscape/seascape.</p>
<p>GEN 8: Coastal Process and Flooding</p>	<p>Developments and activities in the marine environment should be resilient to coastal change and flooding, and not have unacceptable adverse</p>	<p>The proposed works will not have a detrimental effect on flooding. A Wave Modelling Study was undertaken to assess the impact on coastal processes. The study concluded that as the proposed berthing pontoon is a floating structure it will</p>

	<p>impact on coastal processes or contribute to coastal flooding.</p>	<p>have no impact on the tidal levels or tidal circulation in the harbour. Additionally, the proposed dredging was found to not be significant in terms of impact on the tidal regime in the harbour. Thus, the proposed scheme will have no significant impact on the tidal regime, either in terms for heights or flows, at Carradale harbour.</p>
<p>GEN 9: Natural Heritage</p>	<p>Development and use of the marine environment must:</p> <ul style="list-style-type: none"> (a) Comply with legal requirements for protected areas and protected species. (b) Not result in significant impact on the national status of Priority Marine Features. (c) Protect and, where appropriate, enhance the health of the marine area. 	<p>No ecological designations, protected areas or priority marine features are identified in the vicinity of the site.</p>
<p>GEN 10: Invasive Non-Native Species</p>	<p>Opportunities to reduce the introduction of invasive non-native species to a minimum or proactively improve the practice of existing activity should be taken when decisions are being made.</p>	<p>The potential for introduction of non-native species with equipment brought in to complete the dredge requires consideration, as discussed in Section 4: Potential Impacts.</p>
<p>GEN 12: Water Quality and Resource</p>	<p>Developments and activities should not result in a deterioration of the quality of waters to which the Water Framework Directive, Marine Strategy Framework Directive or other related Directives apply.</p>	<p>Carradale Harbour is within Water Framework Directive waterbody 200025 Kilbrannan Sound. Preservation of water quality has been considered in Section 4: Potential Impacts.</p>

<p>GEN 13: Noise</p>	<p>Development and use in the marine environment should avoid significant adverse effects of man-made noise and vibration, especially on species sensitive to such effects.</p>	<p>Piling works will generate sound with a frequency range of 500 to 2,000 hertz. Refer to Section 4 for mitigation measures.</p>
<p>GEN 14: Air Quality</p>	<p>Development and use of the marine environment should not result in the deterioration of air quality and should not breach any statutory air quality limits.</p>	<p>Carradale Harbour is located outwith any Air Quality Management Plan areas. No significant effects on air quality from the proposed works are predicted.</p>
<p>GEN 18: Engagement</p>	<p>Early and effective engagement should be undertaken with the general public and all interested stakeholders to facilitate planning and consenting processes.</p>	<p>MOWI Scotland Ltd. have engaged with the local community and the Statutory Harbour Authority (Argyll & Bute Council) regarding the proposed works and future development in and around the harbour.</p>

4. ENVIRONMENTAL CONSIDERATIONS

Potential impacts arising from the proposed works at Carradale are described in Table 2, along with identified mitigation.

Table 2 - Potential Impacts by Activity/Topic and Proposed Mitigation

Activity	Potential Impact	Mitigation Measures
Dredging activity – removal of sediment from harbour bed	Possible reduction in water quality due to increased sediment loading in water column.	<ul style="list-style-type: none"> • Ground investigation found that ground is mostly sand with low silt content. • Works will be monitored to ensure silt plumes remain localised and dissipate quickly; • Should silt plumes be persistent and widespread, methods will be reviewed; • Additional mitigation may include specific dredge techniques which allow material to settle within the bucket of a backhoe dredge prior to removal from the water.
Disposal activity – dumping of dredged material at spoil site	Possible reduction in water quality due to increased sediment loading in water column.	<ul style="list-style-type: none"> • Existing licenced spoil site MA060 will be used. • A split-hopper or equivalent bottom-opening vessel will be used, a low energy process which encourages material to drop promptly to the seabed; • Works will be monitored to ensure silt plumes remain localised and dissipate quickly; and • Should silt plumes be persistent and widespread, methods will be reviewed.

Operations and movement of dredge disposal vessels	<p>The introduction of Invasive Non-Native Marine Species (INNMS) from vessels / equipment has the potential to cause ecological impacts.</p>	<ul style="list-style-type: none"> • Equipment mobilised to carry out the dredge will be inspected to ensure it is free from soilage; and • All vessels are expected to be compliant with the relevant requirements of the International Convention for the Control and Management of Ships' Ballast Water and Sediments 2004 and where appropriate follow Guidelines for the Control and Management of Ships Biofouling to Minimize the Transfer of Invasive Aquatic Species.
	<p>Marine Navigation - Dredging vessels operating in the area may adversely affect the safety of other water users during the proposed works.</p>	<ul style="list-style-type: none"> • All vessels operating in the area will be under direction of the Harbour Master; • A Notice to Mariners will be issued in advance of the works; and • Dredge/disposal vessels will adhere to a fixed route, speed and direction when carrying out operations. This will be done as far as practicably possible with regards to tidal and weather conditions.
	<p>Containment – fuel/oils and hazardous substances - Accidental releases of hazardous materials from spills or leaks can impact upon land and/or water quality with knock on ecological implications if not dealt with promptly.</p>	<ul style="list-style-type: none"> • Appropriate maintenance will be carried out on vessels, plant and machinery to minimise the risk of leaks; • Bunded fuel, oil and chemical storage will be provided, and will be locked when not in use; • Refuelling will be carried out by trained operatives following site refuelling procedures;

		<ul style="list-style-type: none"> • The dredge contractor will be required to align to the harbour’s spill plans and spill kits will be in place with operatives trained in their use; and • All oils and chemicals will be subject to Control of Substances Hazardous Health (COSHH) assessments under the COSHH Regulations 2002.
	<p>In-Air Noise - Plant and vessels used during the proposed dredging activity will generate noise. While this is not anticipated to differ significantly from routine vessel operations within the harbour, including previous dredge works, it will be audible to people in the Harbour area.</p>	<ul style="list-style-type: none"> • Dredging activity will take place during daytime hours only, as far as practically possible; • Noise control measures will be implemented as best practice, following guidance from ‘BS5228:2009 Noise and vibration control on construction and open sites’: <ul style="list-style-type: none"> ○ Plant will be shut down between work periods or throttled down to a minimum; and ○ Regular maintenance of all equipment used on site will be conducted, including maintenance related to noise emissions.
	<p>Waste/Litter - Waste from general site activities that is not managed appropriately may be released into the terrestrial or marine environment where it can cause harm.</p>	<ul style="list-style-type: none"> • Good housekeeping on all floating plant will be employed during the works; • Plant operatives will be made aware that littering will not be tolerated; and • The use of single use plastics will be discouraged.

<p>Piling Works</p>	<p>Underwater noise – Piling works causing noise and vibration with the possibility of disturbing marine species.</p>	<p>Odex piling will be used to install the guide piles for the pontoons. Although the chances of acoustic disturbance causing effects at a level to impact upon an individual's ability to survive, breed, reproduce or raise young have been assessed as unlikely, mitigation measures will still be implemented. Full JNCC mitigation protocols will be implemented as outlined in the ‘Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise’ (JNCC, 2010). The mitigation protocols will be applied to all marine mammals and other marine megafauna.</p>
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5. CONCLUSION

This document has been produced to provide supporting information and assist Marine Scotland in assessing the Marine Licence Applications for the proposed works to install a new pontoon and undertake dredging within Carradale Harbour on behalf of MOWI Scotland Ltd. The document has provided details of the project and sets out how the Marine Licence Applications for the Construction and Dredge & Disposal activities have considered Scotland's National Marine Plan (SNMP) by outlining the SNMP policies and describing the potential interactions of the proposed works with the SNMP. Potential environmental impacts have also been considered with and mitigation measures identified.

It has been concluded that the proposed works associated with the marine licence application for the installation of a new pontoon and dredging within Carradale Harbour are generally in line with the policies outlined in the SNMP. It is anticipated that the works are unlikely to adversely affect the aims of the plan.

In addition to this document, a Best Practicable Environmental Option (BPEO) report has been produced to consider the most appropriate means of disposing of the dredge spoil. The BPEO will also be submitted as part of the Dredge and Disposal Marine Licence Application.

Appendix A – RPS – Wave Modelling Study

Appendix B – Photographs



Photo 1 – View of Carradale Harbour from existing slipway



Photo 2 – View of existing quayside at proposed pontoon access bridge location