



Wallace Stone
Marine Consulting Civil Engineers

Newton Marina
Goat Island
Stornoway
Isle of Lewis
HS1 2RS

Project Reference:

Construction Environmental Management Plan

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RJ McLEOD (Contractors) Limited
2411 London Road Glasgow G32 8XT

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1. Introduction

The Plan has been prepared to meet the requirements of the Works Information and the anticipated requirements of the Marine Licence which has been applied for the Newton Marina Works. The site within Newton Basin and Goat Island is located within an area of Stornoway Port owned by Stornoway Port Authority. The Client for the works is the Stornoway Port Authority and the Designer is Wallace Stone.

The scope of the works includes demolition (Concrete wall, slab & 2No sheds), dredging, infill works, mass fill concrete retaining wall, rock armour, break waters, concrete slipway, boat hoist installation, piling for pontoons, road works, drainage works, services and electrical works. The working area is shown in Figure 1 below.

The CEMP forms part of the overall Project Management system and should be read in connection with the Construction Plan, which deals primarily with Quality, Health and Safety and Training. Individual Method Statements and Risk Assessments are prepared for each construction activity.

Marine Works Area (Within Red Boundary)



Figure 1 – Area of Works

2. Roles and Responsibilities of Staff

The line of responsibility for environmental management during the construction phase is shown below in Figure 2. Descriptions of individual environmental management responsibilities are described in the following paragraphs.

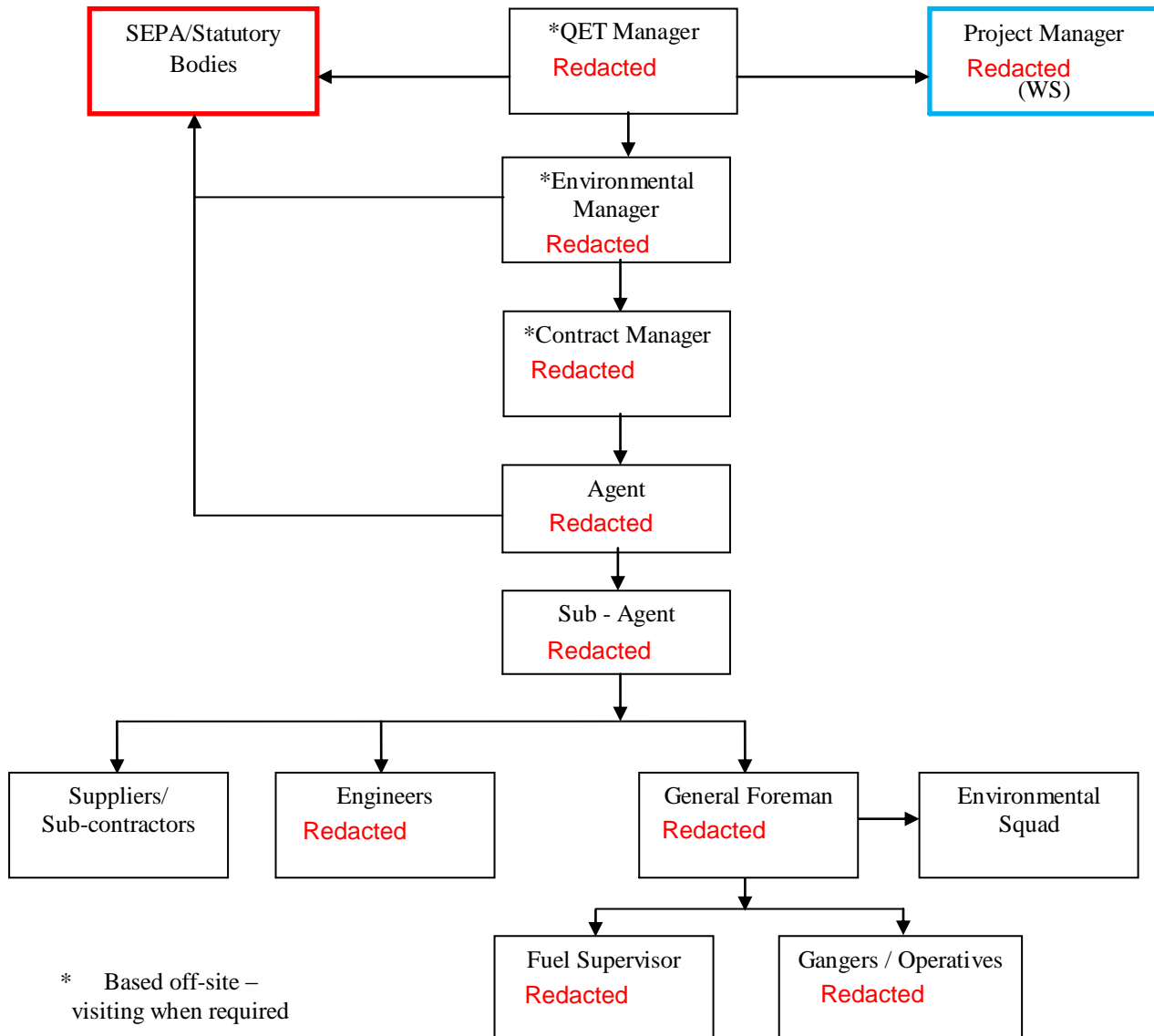


Figure 2 – Lines of Responsibility for Environmental Management during Construction

QE Manager – Redacted

Based in the Company's Head Office, Red reports directly to the Board of Directors and is responsible for the management of the quality and environmental systems. In addition R is responsible for overseeing and co-ordinating the day to day activities of the Company's Health and Safety and Training Officers.

The QE Manager is responsible, mainly, for the day to day development, monitoring and maintenance of the Company's Management Systems (ISO9001, ISO14001 and ISO18001). In addition, R is responsible for ensuring that all relevant employees are made aware of any statutory requirements and legislation (environmental) relative to the works that they will be undertaking. The QE Manager is also expected to provide specialist advice and assistance to site employee's when required. The QE Manager also provides Environmental training to all employees on a wide range of topics, including Legal Requirements, Pollution Prevention, Ecology and Waste Management Duty of Care.

Where necessary the QE Manager will attend any meetings involving environmental issues and will liaise with Clients representatives on these matters.

R will undertake the Company Environmental Audits in line with the Auditing Frequency detailed later in the Plan.

Contracts Manager – Redacted

R is responsible for ensuring that the RJ McLeod Environmental Policy (and Health and Safety and Quality Policies) is implemented on the sites under his supervision. The Contracts Manager, who reports to the Construction Director, is responsible for the actions of all staff, operatives and sub-contractors reporting directly or indirectly to them. R will maintain overall responsibility of the EMP and the site's Environmental performance.

Site Agent – Redacted

R is responsible for the Health and Safety, Quality and Environmental performance of the site during the construction period. Insofar as environmental matters are concerned, the Agent is responsible for the actions of all staff, operatives and sub-contractors reporting directly or indirectly to them.

It is the responsibility of the Agent to ensure that any individual given delegated authority or responsibility for aspects of the environmental management of the site is appropriately trained and experienced to carry out the work.

R is responsible for ensuring that the appropriate resources are made available, and any necessary environmental controls or mitigation measures are implemented. This requires the coordination and management of all environmental activities on site during the construction phase, and will include the following duties;

- Develop the CEMP and Associated Plans and highlight specialist procedures.
- Identify environmental competence requirements for all staff working on the Project and ensure delivery of environmental training to personnel within the site team.
- Act as a main point of contact between the regulatory authorities and the Project on environmental issues.
- Overall monitoring of the programme for environmental works, and provision of status reports as necessary.
- Personnel and sub-contractors.
- Liaison with the Clients Environmental Manager.
- Involvement in Interface Meetings with all Construction Parties on site.
- Management of the environmental monitoring programme, including noise, vibration and dust and review the routine reports.
- Environmental audit of subcontractors and suppliers.
- Responsible for the MMO Programme
- Responsible for ensuring the works are in line with the JNCC Piling Guidelines

Sub Agent – Redacted

R is responsible for ensuring that the appropriate resources are made available, and any necessary environmental controls or mitigation measures are implemented. This requires the coordination and management of all environmental activities on site during the construction phase, and will include the following duties;

- Develop the CEMP and Associated Plans and highlight specialist procedures.
- Identify environmental competence requirements for all staff working on the Project and ensure delivery of environmental training to personnel within the site team.
- Act as a main point of contact between the regulatory authorities and the Project on environmental issues.
- Overall monitoring of the programme for environmental works, and provision of status reports as necessary.
- Personnel and sub-contractors.
- Liaison with the Clients Environmental Manager.
- Involvement in Interface Meetings with all Construction Parties on site.
- Management of the environmental monitoring programme, including noise, vibration and dust and review the routine reports.
- Environmental audit of subcontractors and suppliers.
- Responsible for the MMO Programme
- Responsible for ensuring the works are in line with the JNCC Piling Guidelines

General Foremen – Redacted

The General Foreman, who reports to the Agent on environmental matters, is responsible for ensuring that the Company's Environmental Policy is implemented on the contract(s) to which **R** has been assigned.

R will ensure that the site is complying with the Pollution Prevention Plan.

R will report to the Site Agent and will be responsible for overall waste management issues arising from the project. Responsibilities include;

- Implementation and monitoring of waste minimisation, segregation and safe disposal measures.
- Daily environmental monitoring of the Control Measures implemented on site
- Will ensure that the Control measures on site are installed and working efficiently
- Will ensure that the plant is being well maintained and checked appropriately.

Site Engineers – Redacted

Will report to the Agent and will be responsible for daily environmental monitoring of the Control Measures implemented on site.

Sub-Contractors

Each sub-contractor appointed by RJ McLeod will provide sufficient evidence (through environmental risk assessment, method statements etc.) to ensure they fully understand the environmental constraints imposed on this site and that all elements of their work are in line with the standard set out in this document.

It shall be the responsibility of RJ McLeod's Contract Managers and/or Agents to establish the suitability of vendors in relation to environmental aspects.

Sub-contractors shall be responsible to RJ McLeod for, but not limited to, the following:

- Provision of their Environmental Policy Statement.

- Providing details of any project specific environmental aspects relating to their works and their proposed control measures.
- Reporting of non-conformances and near misses or incidents.
- Ensuring that their site personnel are fully aware of their collective and individual responsibility towards RJ McLeod environmental standards.

Where sub-contractors do not have their own Environmental Policy, they shall be expected to comply with the requirements of RJ McLeod's Environmental Policy Statement.

3. Summary of Procedures

The RJ McLeod Environmental System is formed by the following Procedures.

RJM – ENV1	Environmental System Manual
RJM – ENV2	Waste Management
RJM – ENV3	Discharges to Water
RJM – ENV4	Environmental Action Plan
RJM – ENV5	Identification and Appraisal of Environmental Risks
RJM – ENV6	Identification and Appraisal of Environmental Legislation
RJM – ENV7	Emissions to Air
RJM – ENV8	Risk rating of Projects – Environment
RJM – ENV9	Pollution Prevention Procedure
RJM - EN3	Re-fuelling Procedure

For additional environmental aspects and impacts, including ecology, please refer to the Environmental Risk Register (specific to the Company Operations).

These are not provided to Consultees but can be provided on request.

4. Legislation Considerations & Regulators

It is RJ McLeod policy to minimise the impact of its operations on the environment and to comply with all current legislation. RJ McLeod maintains and updates a compendium of the current legislation affecting its operations. The environmental legislation and regulations which must be adhered to is listed in the Company's Environmental Legislation Register, RJM-ENV6.

In addition to complying with the various pieces of legislation noted above, RJ McLeod implements an Environmental Management System which is registered to BS EN ISO14001:2004.

The Environmental Impact Assessment (EIA) has been finalised ahead of the start of the main works & the Ecological Constraints have also been identified in section 20 of the Works Information. There may be amendments or additional measures required following the completion of the marine license Application.

Contact details for the Statutory Regulators can be found in the RJ McLeod Construction Phase Plan with the page extracted and copied onto the site noticeboards for all site personnel.

5. Environmentally Significant Changes

It will be the responsibility of the Site Agent to ensure that any changes to the construction methods or temporary works design do not compromise the measures set out within this document.

In the event that significant changes are unavoidable (i.e. resulting in changes to the CEMP). It will be the responsibility of the Site Agent to ensure that these revised measures do not conflict any of the consents and permissions highlighted above, as well as continuing to satisfy Mitigation Measures.

The following procedure should apply;

- RJM adjust Construction Method or Temporary Works Design
- Site Agent will carry out an initial assessment to ensure alternative procedures agree with various consents/permissions, as well as relevant mitigation measures.
- Site Agent will submit a proposal to the Project Manager for approval based on the assessment above via email.
- Upon acceptance, The CEMP, Environmental Risk Assessments and any relevant Environmental Method Statements will be revised as necessary by the Site Agent, before being reviewed by the RJM QE Manager. All will then be re-submitted to the Project Manager. This will also be recorded at a monthly progress meeting.

6. Communications, Monitoring and Reporting

6.1 Liaison and Consultation Requirements

PRECONSTRUCTION

- Contact will be made with the following consultees in regard to environmental impacts on the site.
 - Marine Scotland
 - SEPA
 - SNH
- In addition contact will be made with all relevant public utilities
- Prior to any construction work commencing, this developed CEMP will be submitted to the Project Manager for review and to Marine Scotland and SEPA to fulfill the requirements of the Marine Licence and planning condition discharge.
- Prior to any construction phase proceeding, any relevant Environmental Method Statements will be provided for review to supplement the CEMP submitted previously.

DURING CONSTRUCTION

- All daily monitoring reports will be stored in an Environmental File on site which can be accessed by the Project Manager at all times.
- Electronic copies of all reports/updates by relevant parties will be submitted to the Project Manager, as well as hard copies being placed in the site Environmental File.

6.2 Monitoring Regime

The various control measures set out in the Environmental Risk Assessment and relevant MS's will require regular monitoring and assessment.

Day to day monitoring will be carried out by the site team, with the Site Agent, Foremen or Engineers responsible for carrying out this assessment and recording the details. The areas assessed as part of these daily checks includes, but is not limited to, the following;

- Silt Management Plan (treatment zones, silt fences, watercourse conditions) on land and in the sea
- Surface Run-Off
- Exclusion zones maintained (fencing, both boundary and in-site exclusions)
- Record of any Environmental Incident
- Dust Suppression (Water Suppressed, vacuum coring/drilling etc.)
- Material Storage
- Exposed Surfaces
- Visual presence of any protected species on site
- Ensure checks are carried out each morning prior to use on plant/machinery for resting otters.
- MMO requirements
- Piling Protocol adhered to
- Re-fuelling areas and COSHH stores
- Noise monitoring

This is based on the evaluation that several members of the site team have a suitable knowledge of construction activities and impacts, are more than capable of carrying out visual inspections on a number of the control measures and recording the findings.

RJ McLeod's Environmental Management System will ensure that audits of environmental performance will be carried out on a regular basis. The corporate audit schedule includes routine environmental and management audits as well as cross project audits carried out internally. The system also incorporates external audits on the EMS system.

Daily and weekly inspections, monitoring and recording of the Environment Aspects on site carried out by RJM Site Management.

Monthly site audits will be carried out at site by RJ Macleod's Environmental Manager **Redacted**

Redacted

Quarterly Audits to be carried out by Q&E Manger or personnel appointed by RJ McLeod.

	Required per week	Expected per month	Expected per Quarter
1. Daily Environmental Monitoring			
RJM Site Management	1	4	16
2. Weekly Site Audits			
RJM Site Management	1	4	16
3. Weekly Environmental meeting			
RJM Site Management	1	4	16
4. Quarterly Audits			
Q&E Manager	0	0	1

RJ Mcleod Trained Marine Mammal Observers

The following operatives have current/valid training to be MMO's on the Newton Marina project:

- Redacted
- Redacted
- Redacted
- Redacted

6.3 Emergency Measures and Heavy Rainfall/ Storm Events

The site drainage scheme will be maintained on a regular basis and designed to cater for expected flows. As a precaution, personnel will also be briefed on what actions to take in an emergency. These will include, but not be limited to the following:

- Excavate an interceptor drainage ditch to direct contaminated water away from a watercourse
- Construct and enlarge settlement lagoons where appropriate.
- Reinforce filtration weirs with silt fencing, straw bales etc.
- Deepen drainage ditches
- Notify SEPA/ Marine Scotland depending on the nature and size of discharge

The Agent and the Foreman on the Contract are deemed to be the responsible people for assessing the daily weather conditions and deciding on the daily programme of works. In that process they consider the Health and Safety and Environmental risks. The information on potential areas to be avoided will be transferred to the site operatives through daily briefings, conducted every morning on site, and specific tool box talks, as required. The Site Emergency Contingency Plan will be placed on all the site notice boards. The site team will be encouraged to use Hold Points within the method statements for the site activities to ensure that control measures are placed to intercept potential silty water before the work commences.

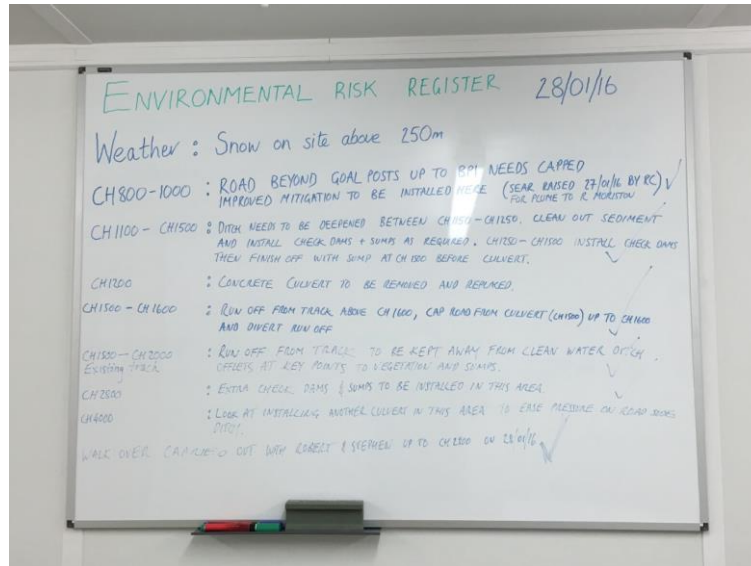
6.4 Site Inductions, Visitors and Tool Box Talks

Implementation of the control measures and the Environmental Management Plan in general, will only be successful if the information they contain is made available and clearly understood by all site personnel/sub-contractors and site visitors. It will be the responsibility of the Site Agent and the Site Foreman to ensure that all personnel inducted are made aware that this area is environmentally sensitive and as such, the relevant rules/measures must be adhered to at all times. They will be provided with specific information relevant to the current situation on site as well as details of the likely penalties if instruction is not followed.

A more detailed Environmental Briefing will be carried out for all sub-contractors who pose a significant environmental risk when carrying out their work. This briefing will concentrate more specifically on individual control measures, as well as a general overview of the Environmental Risk Assessment and the remainder of the CEMP.

Environmental based "Tool Box Talk" briefing will be carried out with all personnel on a minimum frequency of once per month or additionally in response to any incident or near miss. A list of these TBT headings can be found in Appendix O; Environmental Tool Box Talks.

On all RJM Sites there is a dedicated QSET Briefing Room. This room is solely used for Site Inductions, Daily Briefings and Tool box talks and in most cases acts as the main egress/ access point. The room contains all the necessary Health and Safety, Environmental and Quality Information and includes the Company Policies, Emergency Procedures, HSE F10 Form, Site Plan and Specific Site Information. A white board is used in the room to identify the daily activities and relevant hazards and is used for the Daily Briefings. The room also contains copies of all the method statement and risk assessments, all relevant sign-in/ permit forms. Examples of the typical whiteboards used to identify environmental hazards are provided on the following page:



RJ McLEOD Bhlaraidh Wind Farm Coordination Board sse Date: 10/3/16			
Project Contacts RJ McLeod Site Agent: Redacted Sub Agent: Redacted Foreman: Redacted Engineer: Redacted RJM Safety Officer: Redacted RJM Erosion Officer: Redacted SSE Project Manager: Redacted Site Supervisor: Redacted Site Advisor: Redacted ECOM: Redacted	Current Work Activities ENABLING WORKS CH 4000 - 6000 ROAD WIDENING & DITCHING ONIONS CH 5200 BRIDGE ABUTMENT WORKS, FILLING GABION BASKET & R.E. BAIL JOINERS CRUSHING IN SUSTATION S.S.R. OVERHEAD DIVERSION CH 800 & CH 5000 & CH 6000	WIP/REM DRILL & BLAST ROCKROAD SPUR 4 + SUSTATION STRIPPING TURFS & SOIL SPUR 4 SPUR 3 WATER VOLS DESTRUCTION AREA Redacted CRUSHING BLAST TO 612 NEXT BLAST FRIDAY 11/3/16 14:00 HRS APPROX	Interface Issues EASTER HOLIDAYS. SITE WILL BE CLOSED. FRIDAY THE 25 MARCH 15:00hrs Back on MONDAY THE 28th APRIL 9:00hrs Contractors on Site C. S. DRILLING, B. DREW & BARRY NORTHBRACH & CRUSHING Weather DRY & SUNNY MILD Training CAT SKILLINGS Days Since Last Time Incident: 1146
Visitors	Project Progress SUSTATION PLATFORM - COMPLETE SITE ROADS - EASTER HOLIDAY COMPLETION	Key Safety Observations SNOW POLES ON L.W.E. GOING UPHELD TO SUSTATION..... 5 ITEMS OF P.P.E.	
Estate Activities DEER STALKING PHEASANT SHOOTING FEEDING DEER CH3100	SEARS / SORS GOOD REINSTATEMENT	Key Environmental Issues → Bad tree CL 4000 (can enclosure) → Bad tree CL 801 (can enclosure) → WATER VOLS SUB STATION PLATFORM CALVERT CROSSING CH 1500 4000 5000	



Figure 3 - Typical Environmental Information Noticeboards in QSET Room

6.5 Protocol for Archaeological discoveries

If a discovery is made during the construction works then the following actions will take place:

- Works must stop in that area
- Site Agent or Foreman must be informed
- Site Agent or Foreman will advise the client
- Either the site team or the client (Or clients representative) will contact the following;
 - CNES Archaeology Department 01851 822 758 (Redacted)
 - HES (Historic Environment Scotland) 0131 668 8600

Works will not recommence in the affected area until the all clear has been given by the CNES Archaeology department.

There are five known Heritage Assets within the ISA (Inner Study Area) & only one within the footprint of the works. If the shipwreck within the footprint of the works is discovered (Or any other Archaeological finds) then the protocol stated above will come into effect. Refer to Chapter 6 of the EIAR for further detailed information & to Table 6.6 (Heritage assets within the Inner study area) for a description of the assets.

Appendix I contains the protocol for Archaeological discoveries produced by the Crown office, this will be displayed in the H.S.E. room 7 also discussed with the site team in the form of a Tool box talk.

6.6 Community Interface and Environment

Through careful construction planning and programming these works will tend to have minimal impact with the public, harbour services and the local environment beyond typical site operations. Where interfaces are encountered these are pre-planned & managed to mitigate any potential impacts. We would intend to meet with the adjacent neighbours before the works commence and provide them with information on the project including time frames and potential impacts. RJ McLeod bring a strong community ethos to any project we are involved in and are keen to offer work opportunities and possible community involvement opportunities, where

the contract allows. RJM will also carry out letter drops ahead of works commencing to all houses in close proximity of the works to ensure they are up to date with the upcoming works.

Tidal working (Night time operations) will be the main impact that we foresee potentially having an impact on the local community. The works will be completed in line with the specification and the Construction Environment Management Plan (CEMP). We will also take into consideration specific requirements from the Marine Licence & recommendations from CNES.

All environmental risks and their impact on the environment will be listed in the outline Environmental Risk Assessment with proposed mitigation measures. The Marine Licence will be complied with and associated conditions incorporated into the works methodology.

The site working hours will be:

Monday – Saturday 0730-2000

Sunday No works

There will be tidal works outwith these hours, the Project Manager & all other relevant parties will be informed ahead of the works in line with the Works Information.

Any complaints will be dealt with at site level unless they cannot be resolved. The contacts for lodging a complaint are as follows:

Redacted

Site Agent

Mobile: **Redacted**

Email: **Redacted**

Address: RJ McLeod Contractors, Newton Marina, Goat Island, Stornoway, Isle of Lewis, HS1 2RS

Redacted

Sub Agent

Mobile **Redacted**

Email: **Redacted**

Address: RJ McLeod Contractors, Newton Marina, Goat Island, Stornoway, Isle of Lewis, HS1 2RS


7. Site Specific Schedule of Mitigation

Envirocentre have prepared a Schedule of Mitigation for the works as part of the Environmental Impact Assessment, Chapter 11, table 11.1. We have extracted the environmental hazards that are related to the works and presented them below. The mitigation measures are summarised and explained fully in the appended reports to satisfy the expected Marine Licence conditions and SEPA planning condition discharge requirements.

In terms of timescale the project is due to commence on 18th March 2019 for areas of non-tidal works (Above MHWS) & 12th April 2019 for any works affected by the tide (Works below MHWS).

Hazard	Environmental Effect	Proposed Mitigation Measures
Marine Ecology		
Presence of Otters	<ul style="list-style-type: none"> Damage to habitat or otters themselves who are a protected species 	<ul style="list-style-type: none"> Include potential for otters in site induction & carry out tool box talks to brief the site operatives. If an otter is spotted within the works area then the client's ECOW must be informed & works cannot commence until the otter has dispersed Should an otter resting site be discovered within the works area then the client's ECOW must be informed, works in this area will be stopped until direction is given by the clients ECOW Artificial lighting should be directed towards the working areas only in order to minimise the effects on otter which can be more active between dusk and dawn.
Marine Mammal Protection Protocol (MMPP)- General Measures	<ul style="list-style-type: none"> Harm/Injury to marine mammals Species affected such as:- <ul style="list-style-type: none"> Otters Common/Harbour seals Grey seals Basking shark Atlantic Salmon European Trout Harbour porpoises 	<p>ODEX Piling (Primary method)</p> <ul style="list-style-type: none"> Refer to piling and dredging RAMS Include for potential of marine mammals in site induction and carry out a specific tool box talk on marine mammals. Operatives to be vigilant of any marine mammals wandering into mitigation zone although works activities have been deemed low risk A soft-start method/gradual ramp-up of power will likely deter harbour porpoise from staying within, or moving into the area where ODEX piling is ongoing Log and record all mammals identified Comply with JNCC protocol MMO watching brief not required unless Impact piling is required for any reason. Piles are not expected to need impact force for installation. <p>Impact piling (Only required if ODEX piling fails)</p> <ul style="list-style-type: none"> Refer to piling and dredging RAMS See Species Protection Plan in appendice F Include for potential of marine mammals in site induction and carry out a specific tool box talk on marine mammals.

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		<ul style="list-style-type: none"> • MMO's employed during piling works to survey the area each day • Soft start procedures at start of shift once area has been cleared by MMO • Noise continual until end of works each day to prevent mammals entering the areas • Log and record all mammals identified • Comply with JNCC protocol
 <p style="text-align: center;">500m Marine Mammal Mitigation Zone</p>		
Construction works on water	<ul style="list-style-type: none"> • Harm/Injury to marine mammals 	<ul style="list-style-type: none"> • Tool box talks will be given to all site operatives who will be working on water to provide additional advice to avoid disturbance to and/or collision with marine mammals • Although MMO is not required on this project, cognisance should still be taken of the 500m mitigation zone & all operatives will employ best practice as per the guidance given in TBT's, induction briefing, RAMS briefings, etc • Refer to RJM Species Protection Plan in Appendix F • Extent of works area marked out by Buoys
<u>Extent of works Areas</u>		

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Water, soils & coastal Processes		
ECOW	<ul style="list-style-type: none"> Suitably qualified person not monitoring works to ensure they are being carried out in line with the CEMP, marine license stipulations & ACOP 	<ul style="list-style-type: none"> A suitably qualified Environmental Clerk of Works (EnvCoW), on behalf of the client, will monitor the construction works to ensure that the CEMP and associated mitigation measures are being implemented effectively. RJM Environmental Manager will check the works are complying with the CEMP proposals on a monthly basis
Best Practice	<ul style="list-style-type: none"> Works not being carried out to the highest possible standards & in line with best practice 	<ul style="list-style-type: none"> Works will be carried out as per the CEMP & construction RAMS following all current legislation Client's ECOW to monitor works RJM Environmental Manager will check the works are complying with the CEMP proposals on a monthly basis
Monitoring Plan	<ul style="list-style-type: none"> Unintentional exceedance of limits & pollution of bay/harbour area due to lack of monitoring 	<ul style="list-style-type: none"> Refer to pollution prevention plan in Appendix C Visual monitoring to be implemented, sampling to take place if plumes of silt are present outwith basin area Bund under retaining wall formed with permeable liner to allow water to filter through whilst holding back the silt
Surface Water Management	<ul style="list-style-type: none"> Surface/ Storm Water Run-off - Normal & unusual weather episodes can carry contaminative material to ground / groundwater resulting in pollution incidents. Potential risk to human, animal & plant life. Accidental Spillage – Unnecessary 	<ul style="list-style-type: none"> Permanent surface water mitigation will be as per construction drawings Temporary Run-off will be dealt with by using the following: <ul style="list-style-type: none"> Silt fences to catch run-off before it enters the shore area. Sumps and ponds to be used to

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	contamination of ground and groundwater. Potential risk to human, animal & plant life by oils / fuels / hydraulics	<p>attenuate surface water for treatment, where space allows.</p> <ul style="list-style-type: none"> ○ Daily monitoring of mitigation measures and more frequent during heavy rainfall events. ○ Bunds may be installed at the water edge. ○ Reclaimed area dealt with separately in next row. ○ Plan will be produced to show the proposed and actual mitigation measures and placed on the site noticeboards. <ul style="list-style-type: none"> • Drip trays & spill kits to be utilised under all static plant. • Re fuel plant at a designated bunded area in line with RJM Procedure EN3 • Report all spillages / leaks to the site team. • Implement a fuel supervisor • Undertake daily inspection of plant. • Refer to Appendix C for Pollution Prevention Plan.
Silt Dispersion during Reclamation	Potential silt dispersal into bay/harbour area if not contained	<ul style="list-style-type: none"> • Dispersion of silt during reclamation operations will be avoided by lining the retention bunds with a geotextile liner. The pipes to discharge water from the reclamation area will be fitted with silt traps to prevent silt return to the basin. The silt traps will be inspected regularly to ensure that they are functioning
Site Compounds	Surface/ Storm Water Run-off - Normal & unusual weather episodes can carry contaminative material to ground / groundwater resulting in pollution incidents. Potential risk to human, animal & plant life.	<ul style="list-style-type: none"> • Runoff from compounds and storage areas will be managed to avoid pollution and sediment entering the basin. Foul drainage will either be contained in a closed system and disposed of at a suitable off-site facility or directed via a temporary connection to the Scottish Water foul drainage system (subject to the consent of Scottish Water).
Concrete	Concrete spillage into sea	<ul style="list-style-type: none"> • The following mitigation is proposed for concrete handling and placement: <ul style="list-style-type: none"> • Pouring of concrete will take place within well shuttered pours to prevent egress of concrete from the pour area. All shutters will be checked as part of the Pre-concrete pour check and recorded on QD132. • Pouring of concrete during adverse weather conditions will be avoided. • Refer to the Pollution Incident Response Plan. Drivers of vehicles carrying concrete will be informed so as to raise awareness of potential effects of concrete and of the procedures for clean-up of any accidental spills. <p>Any excess concrete will be taken to the compound area and left to harden. It will then be used as backfill. No excess will be left below MHWS</p> • There will be no concrete batched on site
Oil, Fuel, Site Vehicle Use and Storage	<ul style="list-style-type: none"> • Accidental Spillage – Unnecessary 	<ul style="list-style-type: none"> • The risk of oil contamination will be

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	contamination of ground and groundwater. Potential risk to human, animal & plant life by oils / fuels / hydraulics	<p>minimised by good site working procedures. The mitigation measures to minimise any risk of contaminant release will be in line with RJM EN3, SEPA, PPG and GPP documents and include the following:</p> <ul style="list-style-type: none"> Storage: <ul style="list-style-type: none"> Storage for oil and fuels on site will be designed to be compliant with GPP 2 and 8. The bund will provide storage of at least 110% of the tank's maximum capacity. Refuelling and maintenance: <ul style="list-style-type: none"> Fuelling and maintenance of vehicles and machinery, and cleaning of tools, will be carried out in a designated area where possible in line with PPG 7. Multiple spill kits will be kept on site. Drip trays will be used while refuelling. Regular inspection and maintenance of vehicles, tanks and bunds will be undertaken. Re-fuelling to be carried out by fuelling supervisor as per RJM site rules Emergency procedure: The Pollution Prevention Plan (Appendix D) includes measures to deal with accidental spillages
Traffic & Transport		
Construction Traffic Management Plan	<ul style="list-style-type: none"> Congestion on roads Road traffic accidents Dust & dirt 	<ul style="list-style-type: none"> The TMP (See Appendix E) will identify the best route to & from site for deliveries. A route has been identified as part of the EIAR, this will be reviewed & if deemed to be the most suitable route will be forwarded to the local roads department for approval All contractors/hauliers will be provided with a site induction pack containing information on delivery routes and any restrictions on routes Temporary construction site signage would be erected along the identified construction traffic routes to warn people of construction activities and associated construction vehicles Construction HGV traffic will be managed to avoid an adverse impact on the secondary school, with the movement of construction traffic restricted during periods of peak travel movements of school pupils The contractor will manage the delivery schedule to avoid congestion on the delivery Routes, a 1 way system will be implemented for deliveries Measures will be taken to maintain roads in a clean and safe condition Considerate driving on site roads and main roads
Noise		
Noise & Vibration Plant	Use of Engine (Plant), compressor and Generators – noise from plant can cause	<ul style="list-style-type: none"> Utilise up to date plant

Newton Marina
Construction Environmental Management Plan

Piling works Marine Vessels Day time works Night time works	nuisance incidents. Potential risk to human, animal & plant life.	<ul style="list-style-type: none"> • Erect suitable timber hoarding / enclosures around generators etc. • Undertake noise monitoring • Plant start on site at 0730 so all noise will commence at the same time, works finish no later than 2000 unless tidal works have been agreed with the relevant parties • Reverse beepers and alarms on plant to provide warning but not high pitched noises • Use of screens and deflectors to reduce noise where practicable • Static plant used in isolated areas – not beside cabins or working areas • Maintain equipment • Maintain speed limits on site • Use complaints log for issues and deal with them as they arise • Switch off plant when not in use • Notify residents of works
	Use of Road Breakers, Road Saws, Rollers, etc.	<ul style="list-style-type: none"> • Utilise up to date plant • Install noise mufflers on specific plant where practicable • Screen of working areas where practicable
		<ul style="list-style-type: none"> •
	Dredging works – tugs, workboats, hopper barges and excavators plus land based earth haulage plant	<ul style="list-style-type: none"> • Dredging will be 24-7 due to the nature of the works • Dredging works noise will not be excessive as the material excavated will be sand and gravels deposited into a barge which will be taken to the designated deposit area and deposited on land by a long reach excavator – so all vessel movements will be localised in the marine works area
Marine Works		
Dredging Vessel Movements Diving works Piling works Rock armour placement	Damage to vessels Sediment discharge during dredging works Impact driving to sea bed	<ul style="list-style-type: none"> • Marine liaison officer employed throughout the works – liaise with SPA/harbourmaster/etc • Follow marine safety system in Appendix G • Follow dredging method statement in Appendix H • Site co-ordination between marine vessels • Control dredging excavation and disposal through land based works and sediment control • Visual monitoring of sediment created through dredging works. • Use marker buoys & navigation lights to demarcate works area • Common radio channels between authorised personnel

Appendices

Appendix A -	Construction Method Statement
Appendix B -	Site Waste Management Plan
Appendix C -	Pollution Prevention and Oil Spill Contingency Plan
Appendix D -	Dust Management Plan
Appendix E -	Traffic Management Plan
Appendix F -	Species Protection Plan
Appendix G -	Marine Safety Management System
Appendix H -	Dredging risk assessment and method statement
Appendix I -	Protocol for Archaeological discoveries
Appendix J -	Environmental Management RAMS
Appendix K -	Emergency Contact Numbers
Appendix L -	Daily Environmental Monitoring Report
Appendix M -	Environmental Policy
Appendix N -	Ecological Constraints Chart
Appendix O -	Environmental Tool Box Talks
Appendix P -	SEPA Pollution Prevention Guidelines
Appendix Q -	Marine Mammal Protection Plan