



USELESS LOOP MAINTENANCE DREDGING





Dredging Environmental Management Plan

22.2818-DOC-PMS-004_Dredging Environmental Management Plan

RN Dredging Pty Ltd.

July 2022

Contractor: RN Dredging Pty Ltd.	Project: Useless Loop Maintenance Dredging	Client: Shark Bay Resources
	Document Title: Project Method Statement	
	Doc. No.: 22.2818-DOC-PMS-004_Dredging Environmental Management Plan	

Revision History

Revision	Date	Description	Prepared By	Reviewer	Approved
A	18.05.2022	For Client Review	TRSH	WJP	-
B	09.07.2022	Include Client comments	TRSH	WJP	-
0	31.07.2022	Issued for use	TRSH	WJP	WJP







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1 Introduction

1.1 Purpose of this Plan



The purpose of RN's Dredging Environmental Management Plan (DEMP) is to highlight the Dredging Contractor requirements outlined in the Shark Bay Resources: Dredging Environmental Management Plan (R-1588_00-7), henceforth referred to as the SBR DEMP, to ensure compliance with the plan and achievement of the Management Targets (MTs) associated with the dredging and dredge material disposal. Detailed management and monitoring actions are included to ensure that the project MTs are achieved.

To minimise repetition, reference to the SBR DEMP shall be included throughout the document.

1.2 Project Scope

Maintenance dredging and disposal of material to restore the design depths in the channel entrance is required to maintain access to the salt export berth located at Useless Loop. Bed levelling work is also required within the berth pocket and approaches to restore design depths in the facility basin. The material to be dredged in the channel is informed clean and acceptable to be disposed of into the designated Offshore Disposal Site shown on the drawings, refer Figure 1.

Based on a 2018 hydrographic survey, the current proposed dredge design involves an estimated dredge design volume of 38,010 m³ within the entrance channel and levelling of 3,740m³ within the basin area. These volumes are to the design lines only and exclude any required over dredging to achieve the design. The total volume dredged and disposed of at the marine disposal site shall not exceed 80,000m³ and the material levelled within the Basin shall not exceed 10,000m³. It is anticipated that material will be dredged utilising our trailing suction hopper dredger (TSHD) Modi R and bed levelling will be carried out using the tug Edi.

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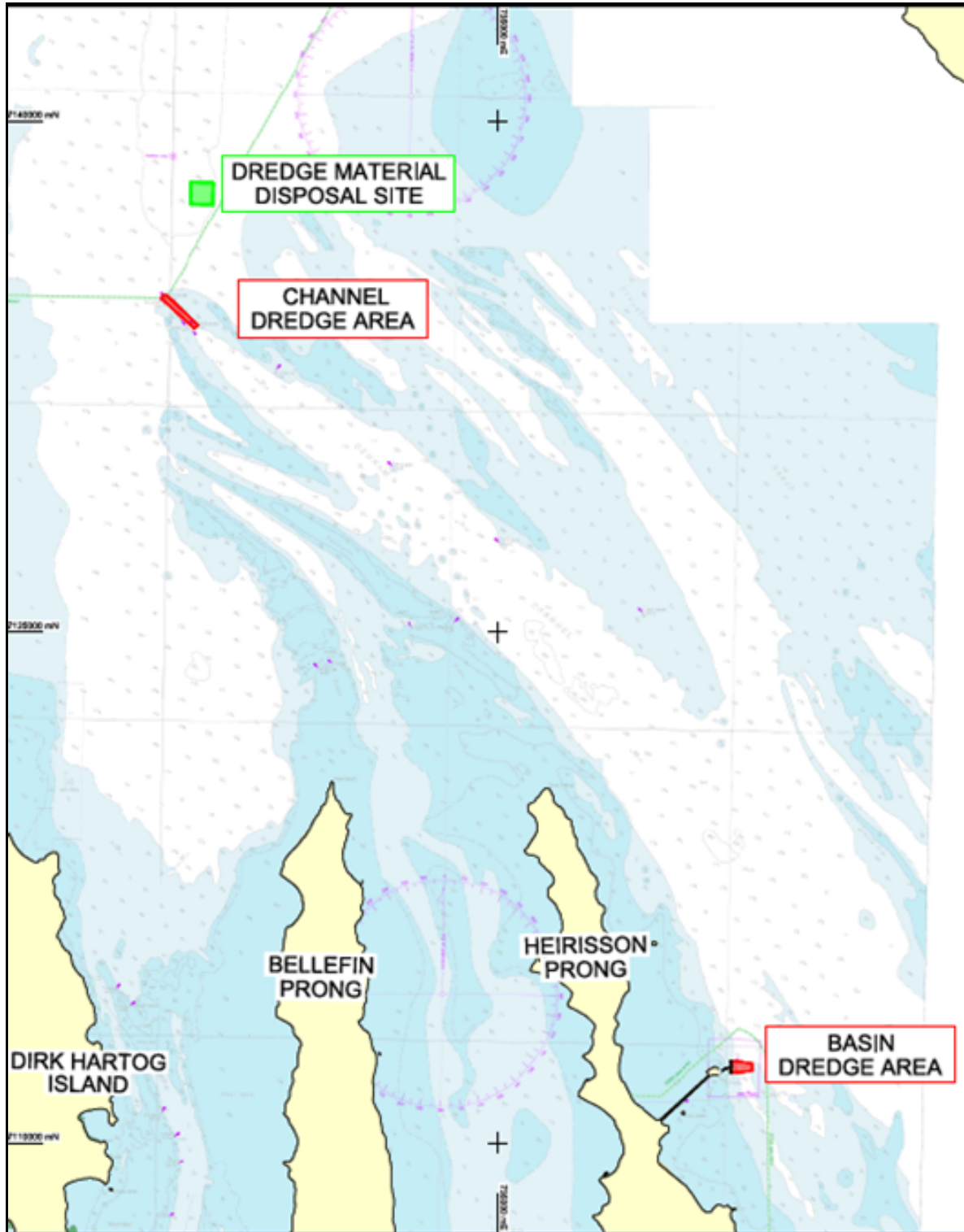




Figure 1: Site Layout

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1.3 Control and Revision of this Plan

The Project Manager is responsible for this Plan and ensuring the most up to date revision is available to applicable personnel. The authorised document and all subsequently approved revisions shall be submitted to the client electronically and in hardcopy and made available online which ensures the control of the most up to date revision.

1.4 Definitions

Abbreviation	Meaning
AMSA	Australian Maritime Safety Authority
AS	Australian Standard
Employer	Shark Bay Resources
DEMP	Dredging Environmental Management Plan
DMPA	Dredge Material Placement Area
DOT	Department of Transport
EPA	Environmental Protection Agency
Hazard	Anything having the potential to cause damage to personnel, equipment and/or environment
IMS	Integrated Management System
ISO	International Standardisation Organisation
IMS	Invasive Marine Species
ISM	International Ship Management Code
MT's	Management Targets
PMS	Planned Maintenance System
PPE	Personal Protective Equipment
PTW	Permit To Work
RN	RN Dredging Pty Ltd
SBR	Shark Bay Resources
SDS	Safety Data Sheet
SOP	Standard Operating Procedure
SOLAS	Safety of Life at Sea Convention
WHS	Workplace Health & Safety

Table 1: Definitions

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2 Legislation, Policy and Other Requirements

2.1 Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The Environmental Protection and Biodiversity Conservation Act (1999) (EPBC Act) establishes a process for the assessment and approval of proposed actions that are likely to have a significant impact on matters of national environmental significance or on Commonwealth land.



Other applicable Commonwealth legislation and guidelines include, but are not limited to, the following Acts, Regulations (and relevant amendments):

- Environment Protection (Sea Dumping) Act 1981 (EPSD Act)
- Protection of the Seas (Prevention of Pollution from Ships) Act 1983.
- Australian Ballast Water Management Requirements Version 8 2019.
- Biosecurity Act 2015.
- Biosecurity Regulations (2016); and
- National Water Quality Management Strategy 2018.

2.1.1 State legislation, regulation and guidelines

The key Western Australian legislation, regulation and guidelines relevant to dredging at Useless Loop include:



- Biodiversity Conservation Act 2016.
- Port Authorities Act 1999.
- Navigable Waters Regulations 1958.
- Shipping and Pilotage (Port and Harbour) Regulations 1967.
- Western Australian Marine Act 1982.
- Pollution of Waters by Oil and Noxious Substances Act 1987
- Marine and Harbours Act 1981.
- Environmental Protection Act 1986.
- Environmental Protection Regulations 1987.
- Fisheries Resource Management Act 1994 (the State Act addressing Introduced Marine Pests).
- Western Australia Environmental Protection Authority Technical Guidance – Assessment Guidelines of Marine Dredging Proposals (WA EPA, 2016a).
- Western Australia Environmental Protection Authority Technical Guidance - Protecting the Quality of Western Australia's Marine Environment (WA EPA, 2016b); and
- Western Australia Environmental Protection Authority Technical Guidance – Protection of Benthic Communities and Habitats (WA EPA, 2016c).

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2.2 Other requirements

RN will ensure compliance with all relevant documentation and aim to employ best practice in environmental management throughout the key areas of the Project. Key requirements for the Project are outlined in the following documents:

- SBR DEMP
- Sea Dumping Permit No. SD2020-3993
- Ministerial Statement No. 1173
- EPBC Act Approval Conditions EPBC2020/8717

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3 Project Structure & Resources

RN responsibilities and accountabilities of conducting works in an environmentally responsible manner lay with all personnel within the organisation and involves all personnel detailed below in ensuring risks are managed to as far as reasonably practicable.

RN employees have an environmental responsibility that needs to be complied with to undertake their roles throughout the entirety of the project.

It is essential that all personnel within the structure of the organisation understand their general duties and responsibilities. The Project Organogram is detailed in the Project Method Statement.

3.1 Area Manager



The Area Manager has responsibility to:

- Implement and to commit to Policies.
- Promote the company's policies, procedures and standards relating to health, safety and environmental management and ensure that they are complied with.
- Provide leadership and lead by example to the project team.
- Commit resources into the project to ensure environmental targets are achieved; and
- Empower the Project Manager, the Project Management Team and motivate and empower all team members.

3.2 Project Manager

The Project Manager has responsibility to:

- Ensure that sufficient resources are available to achieve the Project's objectives and targets and that those resources have sufficient skills to conduct the roles competently.
- Compliance with all relevant legislation and approvals during dredging and placement operations.
- Implementation of detailed management plans:
 - *Operational dredge management plan (DEMP) principally related to dredging, bed levelling and how they will comply with existing approvals for these activities.*
 - *Adherence to detailed environmental management plans (i.e. DEMP, SBR DEMP).*
- Report performance on a regular basis to internal and external stakeholders.
- Report significant incidents internally and externally as required by law and client requirements.
- Ensure the Project achieves legislative compliance.
- Encourage the reporting of incidents, events and other concerns and ensure that there is appropriate feedback on proposed corrective actions; and
- Provide project leadership, direction and performance and drive a collaborative proactive culture through the project team.

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3.3 Vessel Masters

The Master is always in charge of the vessel. The Master has complete authority and is responsible for safety, pollution prevention and the efficient operation of the vessel. The Master may deviate from documented vessel procedures if human life, property or the environment is at risk.

In everything to do with the safety of persons, property or the environment, the Master reports directly to the Designated Person Ashore.



The Master is responsible for:

- Making sure the environmental policy is working.
- Reviewing safety and pollution prevention activities and reporting any problems to the DPA.
- Issuing orders in a clear and concise manner.
- Making sure that procedures for safe operations and the protection of the environment are followed.
- Reporting defects, hazards, incidents/accidents to the office.
- Making sure the crew understands their duties and responsibilities as described in the vessel safety management system (ISM Manual).
- Working with the Designated Person Ashore in holding on board reviews.
- Evaluating and reviewing the ISM Manual on board the vessel and reporting any problems to the DPA.
- Making sure that ISM records are up to date and available.
- Making sure when manoeuvring vessels that cetacean management requirements are always considered.
- Maintenance of water management on vessel as per ISM manual.
- Maintenance of sewage management systems and procedures on vessel as per ISM Manual.
- Management of emergency response drills as per ISM Manual.
- Ensuring personnel on-board are aware of their environmental responsibilities.

3.4 All Personnel

All project personnel have the following environmental responsibilities:

- A duty of care to protect the environment, including a responsibility to notify their direct report when they consider that there is actual or potential environmental harm.
- To follow the instruction of the RN employees for managing the environment.
- To report all environmental incidents and near misses, regardless of size.
- Assisting the project in achieving objectives for waste management; and
- To conserve energy and minimise water consumption, whether office or site based or a combination of both.

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4 Communication

Internal and external communication and consultation arrangements are described below. The SBR communications specialist or delegate will be responsible for and undertake all requirements with respect to community liaison.

4.1 Internal communication

Internal communication methods can include meetings, emails, newsletters and notices, and possibly environment notice boards.

Regular meetings between RN and Project personnel will be scheduled as necessary. Environmental matters will be included as a standard agenda item at these meetings.



4.2 External communication

RN will not communicate any items related to the project externally. In case RN is addressed by external stakeholders, RN will make no statements except from referring to the Employer.

4.3 Communication Management

RN have an obligation to report events that have or may cause environmental harm to SBR as required under applicable laws and conditions.

Any breach of an environmental approval condition must be reported to SBR within 24 hours of RN becoming aware of a breach.

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5 Dredging Environmental Aspects & Impacts

5.1 Project Aspects & Impacts

The following aspects and impacts are specific to the project:

- Introduced Marine Pest.
- Benthic Communities and Habitat.
- Marine Environmental Quality.
- Marine Fauna.
- Hydrocarbon Management.
- Waste Management.

For each element identified, an environmental management strategy, measures and actions have been developed to address potential risks that may arise. Each element has a stated:

- Environmental Protection Outcome (EPO)
- Management Target (MT)
- Management actions
- Responsibility
- Reporting
- Frequency
- Timing



The above aspects, impact's and environmental elements are represented in more detail in the Table 3-1 and Table 3-2 within the SBR DEMP.

5.2 Dredging Aspects and Impacts

RN's approach to the management of the aspects and impacts specifically related to conducting the dredging works is outlined within this section.

5.2.1 Marine Pests



Management Element	Marine Pests Control Aspects
Objective	– To ensure no introduction of non-native marine species / introduced marine species (IMS) to the waters surrounding Useless Loop and state waters.
Potential Impacts	– Translocation of introduced marine pests to the environment adjacent to the project area
Performance Criteria	– Manage vessel activities to prevent the introduction of introduced marine pests into and within State waters.

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Management Element	Marine Pests Control Aspects
Mitigation Measures	<ul style="list-style-type: none"> – Conduct a risk assessment of all vessels that will be used on the Project. – Conduct an in water inspection of the bed levelling and survey vessels within 24 hours of the vessels departing for Useless Loop – Vessel Check risk assessment tool to be used for all vessels on the Project and achieve a Low rating prior to mobilising to site – Vessels to be monitored for non-native marine species during the project
Monitoring & Reporting	<ul style="list-style-type: none"> – Results of the Vessel Check risk assessment of all vessels to be provided to SBR prior to vessel arrival onsite. – Inspection report from in water inspections to be provided to SBR prior to vessel arrival onsite.
Corrective Action	<ul style="list-style-type: none"> – Vessel not to enter Western Australia without approved Introduced Marine Pest documentation – During the course of the works, if suspected IMS are identified then the area will be photographed, isolated, cleaned and reported to FishWatch (1800 815 507) and Aquatic Pest Biosecurity Section (aquatic.biosecurity@dpird.wa.gov.au). All other equipment to be inspected.

5.2.2 Water Quality

Management Element	Water Quality Control Aspects
Objective	<ul style="list-style-type: none"> – Maintain water quality to meet criteria at the zone of moderate impact (ZoMI)/zone of influence (Zol) boundary.
Potential Impacts	<ul style="list-style-type: none"> – Excessive turbidity created into the surrounding waters as a result of the dredging and dumping operations.
Performance Criteria	<ul style="list-style-type: none"> – Water quality impacts to be continuously monitored and rectified in a timely matter.
Mitigation Measures	<ul style="list-style-type: none"> – Overflow to be conducted using a “green valve”. – Minimise overflow where possible – Monitor turbidity plumes through visual observations – On incoming tides, disposal will target the North-Western area of the disposal area, to limit impact on the seagrass meadows to the south.
Monitoring & Reporting	<ul style="list-style-type: none"> – Daily Visual Plume Sketch completed and photograph taken during the hours of 1100 and 1300. – SBR Representative to install a Remote Imagery Unit (RIU) to the dredger and bed leveller
Corrective Action	<ul style="list-style-type: none"> – If excessive turbidity plume is noted, operations to be reviewed to determine the cause of the plume and agreed strategies to be implemented to address the cause.

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Overflow via Green Valve

A conventional hopper overflow system on a TSHD will entrain air during the overflow process. The overflow system consists of a cylindrical weir with an adjustable height to control the required level of the liquid in the hopper. Air is trapped in the overflowing mixture and carries particles of material to the surface when it rises in the form of bubbles. Air can be prevented from entering by a regulating valve. This so-called 'environmental valve' or 'green valve' (see Figure 2) controls the level of the overflowing water column in the lower vertical pipe of the overflow system. Because the overflowing mixture has a higher density than the surrounding water, it will behave like a column of water of higher density, which falls to the bottom of the dredging site.

Modi R is fitted with a green valve within overflow system which will be utilised during the course of the Project. Suspended sediments will be encouraged to settle towards the seabed, staying closer to the dredging area and reducing the amount of turbidity in the surrounding environment. Furthermore hopper overflowing will be generally minimised to reduce the overall turbidity impact as far as practical across the whole project.

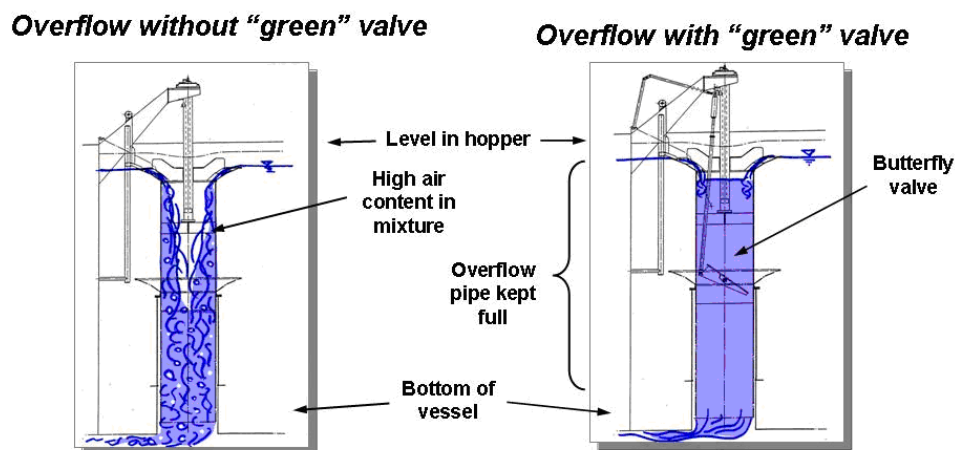




Figure 2: Green valve.

5.2.3 Benthic Communities and Habitat



Management Element	Water Quality Control Aspects
Objective	<ul style="list-style-type: none"> Restrict permanent loss of BCH to the zone of high impact (ZoHI)
Potential Impacts	<ul style="list-style-type: none"> Excessive dredging and dumping of benthic communities and habitat.
Performance Criteria	<ul style="list-style-type: none"> Dredging or dumping activities to only be conducted within the areas defined on the Contract Drawings.
Mitigation Measures	<ul style="list-style-type: none"> Employ high-resolution positioning system to control dredge operations, ensuring that all dredging and bed levelling is undertaken within the approved area depicted on the Contract Drawings. Positioning equipment to be verified and corrected

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Management Element	Water Quality Control Aspects
Monitoring & Reporting	<ul style="list-style-type: none"> – Vessel Track Logs
Corrective Action	<ul style="list-style-type: none"> – If dredging or dumping is noted outside of the approved areas, operations to be reviewed to determine the cause of the discrepancy and agreed strategies to be implemented to address the cause.

5.2.4 Fauna Observation



Management Element	Fauna Observation Management
Objective	<ul style="list-style-type: none"> – To ensure vessels deployed on the project do not interfere with the fauna inhabiting the waters of Useless Loop and surrounds. – To monitor all fauna within close vicinity of vessels
Potential Impacts	<ul style="list-style-type: none"> – Injury or death of marine fauna as a result of dredge operations – Injury or death of marine fauna due to vessel movement (strike) – Water quality impacts on marine fauna
Performance Criteria	<ul style="list-style-type: none"> – No reported incidences of marine fauna injury or death as a result of water quality impacts – No reported incidences of marine fauna injury or death as a result of dredge operations – No reported incidences of marine fauna injury or death as a result of vessel strike
Mitigation Measures	<ul style="list-style-type: none"> – Reduce turbidity impacts through the operation of the “green valve”. – Implement a 20min observation period across the 3km monitoring zone and a 20min soft start procedure for the pump prior to commencing each trip. – Implement a 20min observation period across the 3km monitoring zone prior to dumping operations – Dredger draghead to be fitted with a turtle exclusion device prior to commencing operations. – Dredger and bed leveller are to have at least one crew member trained as a Marine Fauna Observer (MFO) on board at all times. – Dredge operations are to cease if a whale is observed within 1500m, if other marine mega fauna (dolphin, dugong, etc) is observed within 500 m or turtle is observed within 300m of the dredge vessel. – The dredger shall cease operations for 20 minutes and observe the dredge area for any marine fauna within the 3km monitoring zone. Dredging operations will only commence if there are no sightings within the monitoring zone. – The dredger shall cease operations for 20 minutes and observe the dumping area for any marine fauna within the 3km monitoring zone. Dumping operations will only commence if there are no sightings within the monitoring zone. – Noise to be kept to a minimum by turning off any unused machinery.

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Management Element	Fauna Observation Management
Monitoring & Reporting	<ul style="list-style-type: none"> Low visibility/night time mitigation measures to be implemented: No dredging to be undertaken in low visibility/night time if in the preceding 24 hours of operations, 3 or more marine fauna-instigated shut-downs have occurred. MFO logs to be complete during all dredge operations. Incident report to be complete if any marine mega fauna (whale, turtle, dolphin etc) remains are observed within the spoil disposal site.
Corrective Action	<ul style="list-style-type: none"> Investigate fauna death and apply required corrective actions and or modifications to dredge operations Investigate why dredge operations were not ceased and apply required correction actions.

5.2.5 Dredge Material Disposal Site

Management Element	Dredge Material Disposal Management
Objective	<ul style="list-style-type: none"> All material to be placed within the boundaries of the approved Dredge Material Disposal Site. Placed material at Dredge Material Disposal Site will not be placed at depths above -10.0m LAT.
Potential Impacts	<ul style="list-style-type: none"> Localised alteration of the morphology of the coastal zone causing coastal erosion. Creation of navigation hazards within the Dredge Material Disposal Site Alteration of the structure of adjacent marine and benthic communities through placement of material.
Performance Criteria	<ul style="list-style-type: none"> No material placed outside of the approved Dredge Material Disposal Site No material placed above the depth of -10.0m LAT
Mitigation Measures	<ul style="list-style-type: none"> Employ high-resolution positioning system to control dredge operations, ensuring that all material is placed within the Dredge Material Disposal Site. Material not to be placed within a 50m buffer within the boundaries of the Dredge Material Disposal Site Dredge Material Disposal Site to be divided into smaller areas to control the placement.
Monitoring & Reporting	<ul style="list-style-type: none"> All dump locations to be monitored to ensure the material is evenly spread. Daily Log to record each dump location.
Corrective Action	<ul style="list-style-type: none"> Seabed leveling of any high spots



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5.2.6 Air Quality

Management Element	Air Quality Control Aspects
Objective	<ul style="list-style-type: none"> – To ensure all vessels and equipment do not generate excessive exhaust smoke.
Potential Impacts	<ul style="list-style-type: none"> – Excessive exhaust smoke or dust released into the environment.
Performance Criteria	<ul style="list-style-type: none"> – Air quality impacts to be continuously monitored and rectified in a timely matter.
Mitigation Measures	<ul style="list-style-type: none"> – Regular maintenance of engines – Pre Starts conducted for all equipment – Monitoring exhaust smoke during operations
Monitoring & Reporting	<ul style="list-style-type: none"> – Record to be kept of maintenance undertaken – Pre Starts recorded – Sources of air quality impacts to be continuously monitored
Corrective Action	<ul style="list-style-type: none"> – If excessive exhaust smoke is noted, engine to be looked at by a qualified person and the issue rectified.

5.2.7 Waste



Management Element	Waste Aspects
Objective	<ul style="list-style-type: none"> – To ensure that general refuse produced on-board the dredge and from the reclamation activities is collected, retained and transferred to an appropriate facility without unintentional material loss
Potential Impacts	<ul style="list-style-type: none"> – Discharge of solid waste into the environment.
Performance Criteria	<ul style="list-style-type: none"> – No loss of solid waste material during collection or transfer.
Mitigation Measures	<ul style="list-style-type: none"> – All waste management and disposal will be carried out in accordance with legislative requirements and relevant guidelines, with consideration for the waste management hierarchy. – Resource use and waste generation will be minimised – The discharge of any solid or liquid waste overboard is prohibited. – Hazardous waste bin available on board to ensure segregation of waste. – The burning of waste is prohibited. – All waste containers will have secure lids in place to prevent water ingress and access to animals. – Captain is responsible for all handling of waste on board. – Licensed contractors will be utilised to remove waste and transport for onshore disposal at an appropriate licenced facility. – Records of Controlled Waste Receipts and Tracking Numbers will be maintained on site. – No bilge water or sediments from tanks will be discharged to the environment.

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Management Element	Waste Aspects
	<ul style="list-style-type: none"> Waste oil, solvents and toxic material will be collected in appropriate, labelled containers for reuse, recycling, treatment or disposal at approved licensed locations. The requirements of the legislation (including relevant maps) for treated and untreated sewage discharge will be followed. The holding tank is to be pumped out either in accordance with untreated sewage requirements under Western Australian legislation or otherwise by appropriate licensed contractors while the dredge is in port.
Monitoring & Reporting	<ul style="list-style-type: none"> Regular visual inspections of collection points and visual inspection of bins. RN to report any loss of waste material or any community complaints received about solid waste management to SBR. <p>The responsible person to report a discharge or probable discharge without delay to the Project Manager. The following details should be provided in a report of marine pollution:</p> <ul style="list-style-type: none"> date/time of incident location (latitude, longitude and physical site) report source and contact number nature, extent and estimated quantity of spill type of oil or description spill source and point of discharge from source identity and position of nearby ships or name of alleged polluter nature and extent of spill and movement and speed of spill local weather/tide/sea conditions whether a sample of the substance spilled has been collected and any additional information that relates to the spill.
Corrective Action	<ul style="list-style-type: none"> Any spills will be managed in accordance with project requirements. If practicable, take measures to retrieve material that is lost. Review procedures causing material loss and take immediate action to rectify.

5.2.8 Hazardous Waste



Management Element	Hazardous Materials Management
Performance Objective	<ul style="list-style-type: none"> To ensure hazardous waste generated on-board is appropriately managed.
Potential Impacts	<ul style="list-style-type: none"> Release of hazardous waste into the environment.
Performance Criteria	<ul style="list-style-type: none"> No inappropriate storage or disposal of hazardous waste.

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Management Element	Hazardous Materials Management
Mitigation Actions	<ul style="list-style-type: none"> – All hazardous waste must be stored in an appropriate and secure manner and clearly marked in accordance with legislative requirements. – Where required, all hazardous wastes shall be transferred to appropriate containers and transported to an appropriate facility for disposal. – Collection and transport of designated hazardous wastes is to be undertaken only by a licensed contractor. – All procedures to minimise spills or leakage during storage and transfer shall be followed. Spill response equipment must be easily identifiable and conveniently located so as to respond to a spill if it occurs.
Monitoring & Reporting	<ul style="list-style-type: none"> – All personnel to carry out regular visual inspections of hazardous waste storage containers to determine their integrity and identify if any spills or leakage has or is occurring. – Incident reports to be provided to SBR detailing any spills or incidents involving hazardous waste and clean-up operations.
Corrective Action	<ul style="list-style-type: none"> – If procedures break down or a spill occurs, procedures to be reviewed and staff trained about appropriate responses.

5.2.9 Fuel Management

Management Element	Fuel Management Control Aspects
Objective	<ul style="list-style-type: none"> – To ensure bunkering of fuel to the survey vessel is appropriately managed and spillage is prevented. – To ensure management of fuel provision and storage to land based equipment is managed and spillage is prevented. – In the event of a spill, there is a rapid response to minimise impacts on the marine environment.
Potential Impacts	<ul style="list-style-type: none"> – Release of fuel or oil into the environment.
Performance Criteria	<ul style="list-style-type: none"> – No spills or leaks during fuel transfer or Bunkering operations.
Mitigation Measures	<ul style="list-style-type: none"> – During fuel bunkering fuel levels are monitored by both vessels. – Vessel to have Ship Oil Pollution Emergency Plan (SOPEP) approved by class.
Monitoring & Reporting	<ul style="list-style-type: none"> – Visual inspections of fuel-dispensing requirements and surrounding water are undertaken during operations and after fuel transfer.
Corrective Action	<ul style="list-style-type: none"> – If an unintentional release or spill occurs, review of procedures and rectify immediately. – Implement contingency and clean-up procedures as per relevant plans outlined in the vessels SOPEP.

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6 Reporting

6.1 SBR Monitoring



To ensure that proposed management requirements outlined in Section 5 are adequate to minimise and reduce the potential environmental impacts, SBR have designed a comprehensive marine environmental monitoring and reporting program. A summary and overview of the monitoring is represented in more detail in the table 3-2 within the SBR DEMP.

6.2 RN Dredging Monitoring

The provision of timely and efficient environmental reporting is crucial in managing environmental aspects and impacts. A summary of the reporting requirements for the project are provided in Table 3.

Report	Content	Timeframe	Recipient
IMS Inspection Report and DPIRD Risk Assessment Outcome	Inspection Report: Details of the inspection/results/risk DPIRD: Report on findings	Prior to Mobilisation	SBR Representative
Daily Report	Load start and end times, Dredger Position, Disposal locations and times	Daily	SBR Representative
MFO Log	Details of any Marine Fauna sightings	Daily	SBR Representative
Plume Sketch	Sketch of the visible plume	Daily	SBR Representative
Marine Fauna Interaction Log	Details of any Marine Fauna interaction	Within 24hrs of incident occurring	SBR Representative
Environmental Incident Report	Details of the incident and outcomes of the investigation	Within 24hrs of incident occurring	SBR Representative

Table 2: Reporting Summary

Contractor: RN Dredging Pty Ltd.	Project: Useless Loop Maintenance Dredging	Client: Shark Bay Resources
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6.3 Incident Reporting

All environmental incidents shall be reported as soon as practicable to the Project Manager who will report to SBR representative.

All incidents shall be recorded on the applicable incident report and investigated.

As soon as reasonable practicable, RN shall:

- (i) immediately notify the SBR representative.
- (ii) properly investigate the Incident and, if required by SBR, co-operate in any investigation of the Incident; and
- (iii) promptly provide a detailed report in respect of the Incident

6.4 Vessel Incident External Notifications

External reporting of environmental related incidents is required in accordance with applicable regulators and include, but not limited to:



- DOT
- AMSA, or
- Flag Port State.

Reporting to environmental agencies will be conducted through SBR or their representative.



6.5 Corrective Action

The implementation of the following corrective actions will take place when necessary:

- In case of environmental incident, the emergency response measures will be implemented to minimise environmental harm and all stakeholders are informed.
- In case of a non-conformance is found, a non-compliance report will be produced.
- Non-conformances will be dealt with in a timely manner and corrective actions will be implemented to prevent the incident from reoccurring.
- Dredging methodology is iterative and will be revised as required.
- Emergency situation response will be implemented in less than 24 hours.
- Complaints will be remedied in a timely manner.
- The relevant stakeholders will be informed of any marine wildlife incident (injury or death) in < 24 hours.

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Appendix 1 – MFO Log and Interaction Log

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Appendix 2 – Plume Sketch Template