Gladstone Ports Corporation

Growth, prosperity, community.

Port of Gladstone Maintenance Dredging Environmental Management Plan

Brief description

This Environmental Management Plan has been developed to document Gladstone Ports Corporation's systems and controls for minimising the risk of environmental impact associated with maintenance dredging activities in the Port of Gladstone.

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Owner	Executive General Manager Marine Operations
Custodian	Specialist – Harbours and Channels

Endorsed by	Specialist – Harbours and Channels on 29/02/2024 DCCEEW on 21/12/2023

If you require any further information, please contact the Custodian.

Contents

1 Terms and definitions

In this Procedure:

"A&I" means Aspects and Impacts.

"Custodian" means under the GPC governance structure, the Custodian is accountable for monitoring the application of the system and advising the owner of the monitoring outcomes, and is also accountable for proposing system design or redesign and facilitation of conformance.

"DAF" means Department of Agriculture and Fisheries (State)

"DAFF" means Department of Agriculture, Forestry and Fisheries (Federal)

"DCCEEW" means Department of Climate Change, Energy, Environment and the Water.

"DES" means Department of Environment and Science.

"EA" means Environmental Authority.

"EBSDS" means East Banks Sea Disposal Site, also known as Off-Shore Material Relocation Area.

"EMP" means Environmental Management Plan.

"EMS" means Environmental Management System,

"ERA" means Environmentally Relevant Activity.

"GBRWHA" means Great Barrier Reef World Heritage Area.

"GPC" means Gladstone Ports Corporation.

"LMDMP" means Long Term Maintenance Dredging Management Plan.

"MDS" means Maintenance Dredging Strategy.

"MP" means Monitoring Procedure.

"MRA" means Materials Relocation Area, Three (3) locations a) Off-Shore at EBSDS or b) In-Channel near Tide Island and c) On-Shore at approved locations.

"MSQ" means Maritime Safety Queensland.

"NAGD" means National Assessment Guidelines for Dredging 2009.

"NEPM" means National Environmental Protection Measures.

"OUV's" means Outstanding Universal Values.

"Owner" means under the GPC governance structure, the Owner is accountable for approval and has the authorised discretion to implement or significantly change the system.

"PBPL" means Port of Brisbane Limited.

"PoG" means Port of Gladstone.

"POLREP" means Maritime Safety Queensland Marine Pollution Report.

"QPA" means Queensland Ports Association.

"SAP" means Sediment and Analysis Plan.

"TACC" means Technical Advisory Consultative Committee.

"TMR" means Transport and Main Roads.

"TOR" means Terms of Reference.

"TSHD" means Trailer Suction Hopper Dredge.

Terms that are capitalised and not otherwise defined in this Procedure are defined in the GPC Corporate Glossary Instruction (as listed in Appendix 1 – Related documents).

2 Introduction

2.1 Purpose

GPC are the holders of an Environmental Authority (EA) for an Environmentally Relevant Activity (ERA) granted by the Queensland (QLD) Department of Environment and Science (DES) under the *Environmental Protection Act 1994* (EP Act). This EA (EPPR00570813) specifically permits ERA16 Extractive and screening activities, Threshold 1(c) – Dredging in a year, more than 100,000t to 1,000,000t. This EMP has been developed by GPC to comply with the requirements of the EA and the EP Act. A recent amendment in 2022 to the EA is the addition of an In-Channel material relation area (MRA) near Tide Island.

GPC are also the holders of a Sea Dumping permit SD2023.4051 granted by the Federal Department of Climate Change, Energy, the Environment and Water (DCCEEW) under the *Environment Protection (Sea Dumping) Act 1981* (the Sea Dumping Act)on the 21 December 2023 for a permit volume of 2,920,000m^3 of maintenance dredging material at the Off-Shore Material Relocation Area (MRA, previously known as East Banks Sea Disposal Site (EBSDS) expiring on 21 December 2033.

Most maintenance dredging material will be relocated to the Off-Shore MRA during the campaign. Some material (up to 75,000m^3) may also be relocated to the In-Channel MRA where validation monitoring will be undertaken to assess the effectiveness of this newly developed approach.

As the operator of the dredger, the Port of Brisbane Pty Ltd (PBPL) (the dredging Contractor) also develops an EMP that covers the operational scope of maintenance dredging works undertaken by their Trailing Suction Hopper Dredge the Brisbane (*TSHD Brisbane*). This plan complies with GPC's EA, Sea Dumping permit and relevant state and federal legislation and is submitted to GPC prior to each campaign.

See Section 5.3 of this EMP for more information on the relevant environmental legislation and approvals.

2.2 Scope

The scope of this Environmental Management Plan (EMP) covers maintenance dredging including material relocation activities by Gladstone Ports Corporation (GPC) at the Port of Gladstone (PoG), engaged Contractors and all associated activities that may impact the environment.

This EMP must be read in conjunction with and also refers to elements of the following associated management documents:

(a) PoG Long-term Maintenance Dredging Management Plan (LMDMP) #1385321;

(b) Gladstone Maintenance Dredging Environmental Monitoring (the Monitoring Procedure) #1013458; and

(c) Contractor Environmental Management Plan.

This EMP (in conjunction with the Long Term Maintenance Dredging Management Plan (LMDMP) and Monitoring Procedure (MP) also serves as an **Operational Plan** and a **Dredge Management Plan**.

2.3 Objectives

This EMP forms part of GPC's Environmental Management System (EMS) and is intended to be a working management document to be used in the day to day operations of maintenance dredging to ensure environmental best practice and legislative compliance. This EMP provides a

structured program for the management of the works to ensure that all reasonable and practicable measures will be implemented to prevent and/or minimise the likelihood of environmental harm being caused during the works.

The objective of this EMP is to:

(a) identify significant and sensitive receptors;

(b) identify environmental aspects and potential impacts;

(c) comply with regulatory and permit requirements;

(d) implement control measures that minimise the potential for environmental harm from the activity to ensure:

  (i) no adverse effect to Great Barrier Reef World Heritage Area (GBRWHA) Outstanding Universal Values (OUV's);

  (ii) the prevention of long term changes in health of (and no net loss of) high ecological value (HEV) sensitive environmental receptors;

  (iii) no long term changes in water quality;

  (iv) appropriate marine ecological condition monitoring is undertaken to inform adaptive management actions that aim to minimise or avoid impacts to marine ecology;

  (v) direct impacts of maintenance dredging are confined to the dredge loading and material relocation area – MRA - (activity footprint) and any impacts outside of this footprint are short term and reversible.

(e) establish contingency plans and emergency procedures;

(f) record organisational structures, accountability and responsibility;

(g) facilitate arrangements for effective communication;

(h) monitor all contaminant releases;

(i) ensure all Employees and Contractors are trained and aware of legislative requirements pertaining to the works as well as commitments made in this EMP;

(j) ensure appropriate records are kept;

(k) ensure that reviews of environmental performance and continual improvement are undertaken periodically.

The Objectives of the Operational Plan (in relation to In-Channel MRA option) is to:

- State the expected volume of material to be relocated in cubic metres.
- Provide a copy of the relevant approvals
- Provide details of the material placement:
- Describe type of equipment to be used in relocation of the material;
- Describe the methods to be utilised for transporting and relocating of the material.
- Describe how a review of previous monitoring data will occur and how potential impacts to sensitive receptors are monitored by a suitably qualified person.

- Reference the monitoring plans, ensuring they are prepared by a suitably qualified person to monitor the impacts to sensitive receptors from the placement and material which has moved from the placement site. The monitoring plan must:

  a) identify and map significant and sensitive receptors in the port area;

  b) identify environmental values and potential impacts;

  c) monitor all releases;

  d) detail the methodology to be used for the collection and analysis of samples (including specific areas to be monitored, when monitoring is to be undertaken and duration of monitoring);

  e) detail the methodology for analysing the data and responding to the results to ensure compliance with conditions;

  f) monitor long-term ecological impacts associated with dredging operations area; and

  g) identify reporting intervals.

- For In-Channel placement provision of a statement from a suitably qualified person demonstrating the continued placement of material at the In-Channel dredge material placement sites will not cause environmental harm.

3 Reef 2050 and Queensland Maintenance Dredging Strategy Framework

This EMP has been established in accordance with the following framework: Reef 2050 Long Term Sustainability Plan (Reef 2050). Reef 2050 provides the framework for the long-term protection and management of the Great Barrier Reef (GBR) and its OUV.

3.1 Queensland (QLD) Maintenance Dredging Strategy (MDS)

In accordance with Reef 2050, the MDS aims to provide certainty to the ports industry and to the wider community that the economic and social contribution of ports are maintained, while ensuring the continued protection of QLD's environmental assets. The MDS presents a standardised long-term maintenance dredging management framework (the MDS Framework).

(a) Guidelines for the Development of Long-term Maintenance Dredging Management Plans (LMDMP)

Principle one of the MDS recommended the development and implementation of LMDMPs in accordance with the MDS Framework. Action one of the MDS required the development of guidelines to assist each GBRWHA port in preparing a LMDMP consistent with the requirements of the QLD Government.

These Guidelines developed in draft by the Department of Transport and Main Roads (TMR) support the MDS by providing guidance on long-term planning and management approaches which should be applied to maintenance dredging of ports in the GBRWHA (Figure 1).

To ensure continual improvement the LMDMP will be reviewed at least every 5 years, to ensure it represents the most up to date understanding of risk, sedimentation processes, options available for sediment management and the management of the impacts of maintenance dredging.

As per Figure 1, GPC has developed the three (3) tiers of Port Planning and Management tools for maintenance dredging at the PoG which includes this EMP and its associated management documents, the LMDMP and the Monitoring Procedure.

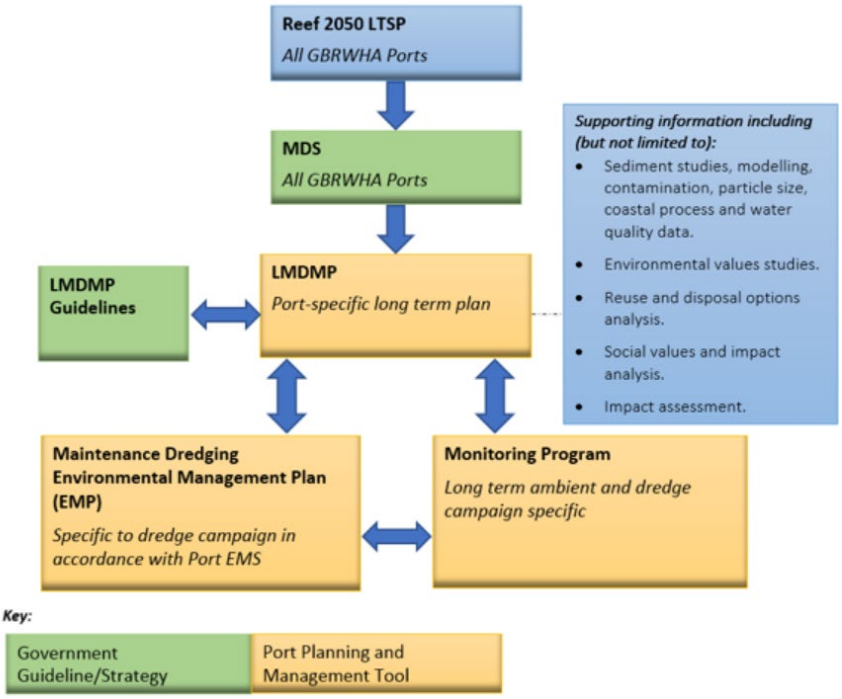

Figure 1 Draft planning and implementation mechanisms for maintenance dredging of Qld ports

(b) Queensland Maintenance Dredging Schedule

(i) Scheduling for TSHD Brisbane

The maintenance dredging schedule for QLD ports is determined by the PBPL for the *TSHD Brisbane*. The schedule is developed annually in accordance with a QLD Ports Association (QPA) procedure which requires each Port to define its maintenance dredging requirements and complete a port specific environmental risk assessment annually. PBPL develops the state-wide maintenance dredging schedule by taking into account:

(A) the volume of material to be relocated at each port (hence dredging duration);

(B) the urgency required by individual ports (i.e. the degree of siltation, safety issues and schedule of deeper draft ships that may visit the port);

(C) any permit specific issues (e.g. permit availability and conditions);

(D) the need to optimise operational efficiency (e.g. avoid backtracking between ports);

(E) opportunities to minimise the dredging duration at each port. Dredge operation is expensive and operational efficiency is a key management objective;

(F) important ecological and environmental timings.

The schedule, once complete, is provided to TMR and published on their website in accordance with the requirements of the MDS.

GPC's Risk Assessment for scheduling annual maintenance dredging at the PoG Risk #1316395 (Appendix C) informs the scheduling process for the

TSHD Brisbane. The risk assessment is conducted in accordance with Section 5.4 – Environmental Risks. The risk assessment includes consideration of important ecological and environmental timings relevant to the PoG namely:

(A) seagrass growing season;

(B) coral spawning;

(C) turtle nesting seasons; and

(D) extreme weather.

Based on the outcomes of this process in 2020, there is no current requirement for the application of environmental windows at the PoG.

(ii) Performance reporting of Maintenance Dredging Impact

GPC conducts a Maintenance Dredging Environmental Performance Internal Audit (audit) annually after maintenance dredging is complete to assist in compiling the Performance reporting of Maintenance Dredging Impact Report.

The Performance reporting of Maintenance Dredging Impact Report is developed from the audit process / outputs and provided annually to Queensland Port Association (QPA) for comparative analysis and to coordinate maintenance dredging schedules.

Additional information on Auditing protocols can be found in Section 5.12

3.2 Implementation

Prior to the commencement of works, this EMP will be approved by the GPC Port Infrastructure Asset Manager. This plan together with the LMDMP and the Monitoring Procedure will be provided the DCCEEW for approval prior to implementation and submitted to DES as the Receiving Environment Monitoring Plan, 20 working days prior to the commencement of dredging.

Works should not be undertaken in a way which:

(a) contravenes this EMP;

(b) is inconsistent with the conditions of the statutory approvals which permits the activity in the PoG (Section 4.2) and/or

(c) is inconsistent with GPC's EMS.

Where there is conflict between this EMP and documents compiled by an engaged Contractor, conditions imposed in this plan by GPC will prevail. All relevant Employees and Contractors should be introduced to and made familiar with the provisions of this EMP and with the procedures and processes which will achieve the objectives relevant to this plan.

This EMP must be implemented prior to the commencement of dredging.

Following the commencement of works, amendments to this EMP and associated documents must be communicated to and approved by the Port Infrastructure and Asset Manager. Significant changes to this document that may increase environmental risk (Section 5.4) must also be communicated with and approved by the DCCEEW and submitted to DES prior to the changes being implemented. Versions must be controlled as per Section 5.18 Review.

4 Activity Description

4.1 Overview

GPC is required to provide safe passage and navigable channels for vessels under the *Transport Infrastructure Act 1995*. This is achieved through regular maintenance dredging of lawful channels. These lawful channels consist of a series of channels, swing basins, berth pockets running from the Fairway buoy to Grahams Creek. Figure 2 below shows the approved footprint that applies to the PoG's main navigation channel maintenance dredging and dredged material disposal activities.

GPC usually completes a major maintenance campaign once annually. The dredger may return to complete a second campaign if required and if it's schedule permits.

Table 1 below summarises GPC's estimates of the volume of maintenance dredging required over a five (5) year period between 2024 and 2028.

Figure 2 Port of Gladstone main navigational infrastructure maintenance dredging works footprint

Table 1 Total proposed and estimated maintenance volume over a five (5) year period (2023 - 2028)

Year	Estimated Volume to be disposed at Off-Shore MRA (m^2)
2024	260,000
2025	340,000
2026	260,000
2027	260,000
2028	340,000
Total	**1,460,000**

4.2 Dredging equipment

A range of dredging equipment is authorised for maintenance dredging under the GPC's EA. TSHDs have typically undertaken the majority of the maintenance dredging at QLD Ports as they are the most suitable type of dredger. Whilst it is noted that future maintenance dredging could be undertaken by other TSHDs with similar equipment features, the maintenance of GPC's main navigational channels has been undertaken by the *TSHD Brisbane* since 2000, and as such GPC's impact assessment and management measures for maintenance dredging presented in this EMP and its associated management documents are primarily focused on this vessel. In accordance with the EA, any TSHD undertaking works must be equipped with:

- below keel discharge of tail waters via an anti-turbidity control valve;
- on-board systems for determining solids/water ratio or density of dredged material;
- electronic positioning and depth control for defining the location and depth of dredging;
- dredge heads fitted with fauna exclusion devices (e.g. turtle deflectors); and
- valves to control the amount of air in overflow water, reducing turbidity.

(a) TSHD Brisbane

The *TSHD Brisbane* is a twin-arm TSHD operated by the PBPL. The vessel is 84m long with a displacement tonnage of approximately 3,500t. During operations it has a crew of 13, operating in two (2) shifts, 24 hours per day, and seven (7) days a week. A more detailed description of the *TSHD Brisbane* and its operation is provided in the Contractor's EMP.

The *TSHD Brisbane* was designed with mechanisms to mitigate the environmental impacts caused by the dredging operations. These mechanisms are equivalent to the features installed in the latest TSHD models used around the world. Since the commissioning of the *TSHD Brisbane* it has been updated regularly to incorporate the latest environmental advances in dredging technology, ensuring the *TSHD Brisbane* operates at the same level as the most recent built TSHDs. The environmental impact mitigation features listed below are described in more detail in the LMDMP:

(i) central weir discharge system (Green valve or anti turbidity function);

(ii) below keel discharge point;

(iii) turtle deflection devices;

(iv) low wash hull design;

(v) electronic positioning system; and

(vi) Environmental Management Plan.

In accordance with Principal 10 of the MDS, any other TSHDs undertaking maintenance dredging works in the future at the ports within the GBRWHA should result in environmental performance that is equal to or better than current equipment or methods used for navigational channel maintenance.

4.3 Activity boundaries

(a) Dredging

The volume of material permitted for extraction during maintenance dredging under GPC's EA is up to 1,000,000t per year. The maintenance dredging volume under the Sea Dumping permit SD2018-3762V2 is 57,689m^3. As shown in Table 1 above, 340,000m^3 is the maximum volume modelled for annual campaigns between 2024 and 2028 and impact assessment has been undertaken accordingly.

The shipping channels and other lawful structures (including the MRA) currently approved for the activity under GPC's EA are shown in Figure 1 above. Dredging is only permitted within the approved footprint of these lawful structures, including batter maintenance. The activity under the scope of this EMP will be confined to the main navigational structures associated with GPC's Sea Dumping permit and all material will be placed at an approved MRA.

Before each campaign, the activity is determined by comparison of required or design depths of a site with pre-dredging hydrographic survey.

(b) Sediment Characterisation

The following information has been taken from the PoG's most recent (2022) Sediment Analysis Plan (SAP) Implementation Report available on GPC's website. The SAP which was reviewed and approved prior to implementation by both DCCEEW is appended to the Implementation Report.

(c) Physical Characterisation

The physical sediment analysis and field observations confirmed that the grain size composition of the sediments varied substantially. In the PoG main channels, there were three (3) distinct seabed types:

(i) Jacobs Channel (Western Basin zone): largely dominated by the finer clay and silt fractions;

(ii) central region between RG Tanna and the southern entrance to Port Curtis (Inner Harbour and Mid Harbour zones):small amounts of cobble and sand fractions;

(iii) outer channel south of the entrance to Port Curtis (Outer Harbour zone): largely sand with some silt and clay.

These observations are consistent with the estuarine hydrodynamics of the PoG and the broader nearshore environment. Finer material is more likely to accumulate in the upper channel (e.g. Jacobs Channel) whilst the hard seabed in the central region is subject to high tidal velocities, which reduce the potential for fine material to accumulate. The outer channel in subject to oceanic currents and northerly sediment migrations that result in increased sediment deposition on the seabed.

(d) Chemical Characterisation

The material dredged under this EMP has been analysed and assessed in accordance with approaches set out in the National Assessment Guidelines for Dredging 2009 ("NAGD") and the National Environmental Protection Measures (NEPM) to ensure the material is appropriate to remove and relocate on land or at sea.

The Sediment Analysis Plan ("SAP") was specifically developed for the Port of Gladstone in 2022 and SAP Implementation Report (2022) determined that the material proposed for relocation in the PoG main channels are not considered contaminated and are suitable for unconfined Off-Shore or In-Channel relocation, or placement within a On-Shore (land based) MRA.

The plan and report is available on GPC's website: http://www.gpcl.com.au.

(e) Material Relocation Areas (MRA's)

(i) On-Shore (Land Based) MRA -No land disposal will be conducted under the scope of this EMP.

(ii) Off-Shore MRA

The Off-Shore MRA is located west-north-west of the Fairway Buoy shown in Figure 2 above. It's approved coordinates are provided in the LMDMP.

WGS co-ordinates of the site are as follows:

230 53' .84S	1510 29' .02E
230 52' .83S	1510 27' .10E
230 51' .53S	1510 27' .91E
230 52' .54S	1510 29' .84E

The site is 3.75km x 2.75km in area with depth ranging from 8m to 13m, with an average of 11m below datum. MRA has adequate capacity to receive the maintenance dredging material under the scope of this EMP.

Before dumping material, the location must be confirmed by GPS that it is within the disposal site and each load of dredged material must be placed across the MRA in a manner to prevent mounding. The bathymetry of the site dictates that material will likely be deposited where there is greatest capacity to receive it.

(iii) In-Channel MRA

GPC has recently undertake a Sustainable Sediment Management (SSM) Project, which evaluated the sustainable options for port sediment management in regards to ensuring channels and infrastructure can be used safely and efficiently. One of the options that rated well following a robust stakeholder evaluation was the use of In-channel material relocation for inner harbour channel sediments. A feasibility study was undertaken for this In-Channel option near Tide Island, which was found feasible and the MRA expected to be fully dispersive. The benefit is this approach may potentially enhance biodiversity in the harbour (by keeping the material in the natural system) while reducing the need for Off-Shore sediment relocation. All SSM Project reports and available on GPC's website.

Material must not be placed above -16 m LAT and GPC must develop, submit and work in accordance with a Marine Execution Plan (MEP) that has been developed by an appropriately qualified person, that includes, but is not limited to the following:

(i) demonstrating that all dredging operations will not impede the safe navigation of other vessels or restrict safe access to or from neighbouring structures.

(ii) consistent with any requirements of Maritime Safety Queensland guidelines for major dredging operations.

(iii) lighting / marking requirements as outlined in the MEP and any anchors deployed must be marked with yellow buoys and fitted with FL yellow lights.

Any lighting should negatively impact Navigational Aids nor illuminate landward glare. Lighting must be reviewed to ensure when implemented it is compliant.

Any material which fall outside the approved footprint must be removed and GPC notified. If any bank or tidal structure is displaced then this must be rectified to former condition and to the satisfaction of the Harbour Master

The Tide Island In-Channel MRA has been included in the lawful footprint of activities under the GPC EA for maintenance dredging.

A map of the area is provided as an appendix of the EA (refer to Appendix 2 Approvals). Records keeping and provision of records to ensure compliance with the Operational Plan as located in Section 5.16.

GDA2020 Zone56 co-ordinates of the site are as follows:

318812.0849	366514.797
319162.9533	7366385.024
319238.0387	7366290.384
320091.8612	7365939.789
320003.5251	7365862.051
319215.9689	7366204.144
319111.0014	7366294.561
318768.9076	7366424.005

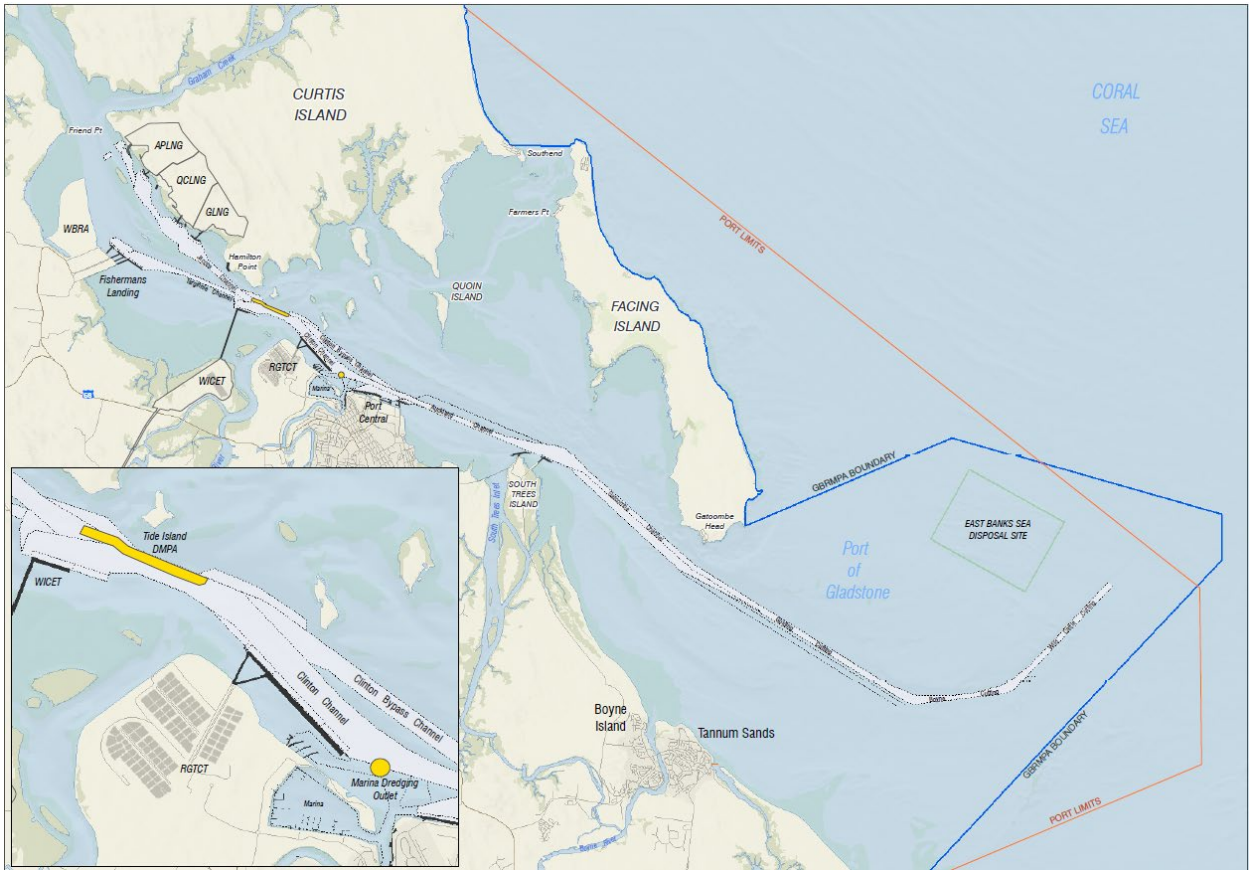

Figure 3 Tide Island In-Channel MRA

4.4 Key Tenancies and stakeholders

Identified tenancies close to the works and key stakeholders may include but are not limited to:

(a) LNG Project Proponents;

(b) GPC Contractors;

(c) surrounding industries and their wharf centres;

(d) local residents and community;

(e) Government Agencies;

(f) other users of the PoG; and

(g) the GPC maintenance dredging Technical Advisory Consultative Committee (TACC).

4.5 Sensitive Environmental Receptors

PoG supports a range of intertidal and sub-tidal habitats that are important in maintaining a range of ecological values. Intertidal habitats (rocky shores, mangroves, saltmarsh, saltpan and mud flats) occur throughout the Port area and seagrass meadows and reefs are well developed.

Although extensive areas of intertidal habitat occur throughout Port Curtis, these are outside of the potential Zone of Impact or Influence from maintenance dredging and sea disposal. Zones of Impact and Influence are defined below and are determined through hydrodynamic modelling of potential maintenance dredging scenarios:

(a) **Zone of Impact**: is defined as seabed areas directly within the activity, sea and In-Channel MRA footprints which are subject to direct removal and surrounding seabed areas containing sensitive receptors (mainly seagrass and hard corals) that are expected to be substantially modified (e.g. mortality) by dredge plumes and sediment deposition

(b) **Zone of Influence**: is defined as the area of seabed where plumes may be evident without necessarily causing mortality to sensitive receptors.

The LMDMP details the hydrodynamic modelling and impact assessment processes undertaken by GPC to identify potential sensitive receptors and potential impacts and inform the development of GPC's monitoring and management framework for the activity as documented in this EMP.

Through this process, the sensitive receptors identified are namely seagrass meadows, reefs, the benthic habitats and protected marine megafauna species. The primary sensitive receptor is identified as seagrass meadows surrounding the Passage Islands, as these meadows experience the greatest duration and intensity of sediment plumes. This seagrass meadow is therefore a focus of GPC's monitoring and adaptive management during maintenance dredging campaigns as detailed in the Monitoring Procedure.

5 Environmental Management System

Activities carried out by GPC conform to GPC's ISO14001 certified EMS – Figure 3. This EMP and its associated documents form part of GPC's EMS.

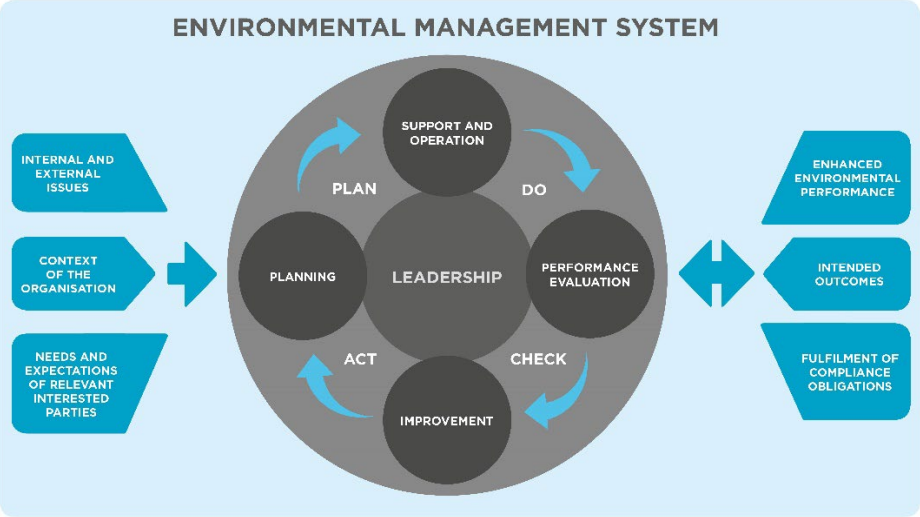

Figure 4 EMS schematic

The EMS Plan #146256 is the overarching directory of the EMS for all activities within the scope of the EMS, and allows easy access to the documents contained within it. The EMS Plan is a concise overview of the framework used to manage environmental risk. The aim of the plan is to be a user friendly tool in the form of a directory to quickly guide the user to the desired area of the EMS.

The provision of services by the Contractor shall be underpinned by the implementation and continual improvement of GPC's management systems consistent with the elements of:

(a) AS/NZS ISO 9001 Quality Management Systems;

(b) AS/NZS ISO 14001 Environmental Management Systems;

(c) AS/NZS 4801 Occupational Health and Safety Management Systems.

5.2 Policy

The GPC Environment Policy #366016 defines the overall aims and direction of GPC towards the environmental management of its activities and commitments to continual improvement. It also describes the direction and responsibilities of GPC in relation to its environmental performance.

5.3 Environmental Legislation

Environmental management of port operations has numerous and varied legislative controls which govern the way GPC conducts its business. To be aware and understand all of our compliance obligations GPC has developed two (2) registers.

(a) Legal Register #1007885 describes firstly, what the legislation is and means, and secondly, how it affects GPC activities. The register is regularly updated to ensure that it captures relevant legislative changes and incorporates new development approvals, permits and registrations applicable to GPC operations.

(b) Conditions Register #1292854 - identifies GPCs approvals, each condition and how GPC meets the condition requirements.

Table 2 below outlines the environmental approvals specific to the activity. A copy of the relevant approvals is provided in Appendix A and must be kept in a location readily accessible to the personnel carrying out the activity.

Table 2 Statutory approvals and documents for maintenance dredging and disposal

Approval / Permit	Permitted Activities
EPPR00570813 (#1840284)	ERA 16 Extractive and screening activities Threshold 1(c) – dredging in a year, the following quantity of material, more than 100,000t to 1,000,000t
SD2023.4051 (#1928497)	Dumping up to 2,920,000m^3 of maintenance dredged material over a ten year period
DA 2206-29253 SDA (#1840277) Referral Agency – GPC (#1840282)	Development Approval and concurrence for In-Channel material placement near Tide Island

5.4 Environmental Risks

GPC's Risk Management Framework provides the processes to ensure the EMS suitably identifies, analyses and evaluates, manages and monitors all aspects under the control or influence of GPC. The risk management process is an integral component of GPCs organisational and operational decision making and ensures all elements of potential impacts are assessed i.e. environmental, compliance, interested parties (stakeholders), project delivery etc.

Risk Assessments are conducted for all new or changed activities and specifically for maintenance dredging annually to ensure risk controls are current, appropriate, communicated, implemented and monitored. Significant changes in risk shall be communicated to the TACC (refer to Section 5.17).

This process informs the development of the state-wide maintenance dredging schedule, this EMP and Monitoring Procedure (Section 3.1) for each campaign. This process also informs the review the LMDMP.

Environmental risks for the activity are assessed and recorded in the VRooom in accordance with the GPC Risk Management Policy and Risk Management Standard #829152.

An abstract of the aspects and impacts register is prepared and provided to PBPL to inform the development of the state wide maintenance dredging schedule (Section 3.1) in alignment with the Great Barrier Reef Marine Park Risk Matrix.

Risk controls are documented and communicated in the LMDMP, this EMP and Monitoring Procedure (MP).

The implementation and effectiveness of risk controls are monitored through processes such as periodical risk reviews, audits, inspections, incident and complaint investigations and reporting (Section 6). More information is provided in the LMDMP.

5.5 GPC Environmental Objectives

The GPC Environmental Strategy #801782 establishes GPC's overall approach and priorities for environmental management. It identifies GPC's environmental objectives taking into account GPC's Environmental Policy, its environmental impacts and relevant legal and other requirements. Section 4 identifies the specific objectives that relate to the activity.

5.6 GPC Environment Standards

GPC has implemented the following Standards to provide clarity of obligations, responsibilities and expectations for environmental management:

(a) GPC Environmental Management Standard #809151

(b) GPC Safety, Environment and Security Standard for Contractors and Port Users #995910

All activities must be conducted in accordance with these Standards.

5.7 Environmental Roles and Responsibilities

GPC Employees and Contractors are responsible for the environmental performance of their activities and compliance with the approvals relevant to this development, as detailed in Table 2 above. GPC Employees and Contractors are also responsible for complying with the general environmental duty as set out in Section 319 (1) of the EP Act which states:

"A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to minimise the harm."

Table 3 below provides a summary of the roles and responsibilities of GPC Employees associated with the implementation of this EMP. As the dredging will be primarily undertaken by the dredging Contractor, the Contractor also has responsibilities and accountabilities detailed in their EMP.

Table 3 Environmental Roles & Responsibilities

Role	Responsibility	Reporting to
Executive General Manager Marine Operations (EGM MO)	Responsible for all aspects of marine operations including maintenance dredging. Responsible for dredge management planning and management of the dredging contracts	Chief Operating Officer

Role	Responsibility	Reporting to
Specialist - Harbours & Channels	Dredging contract. Implementation of this EMP and responsible for ensuring compliance obligations are met as well as reporting to the relevant authorities. GPC contact for operational issues and management of Contractor and contract.	Executive General Manager Marine Operations (EGM MO)
Manager Planning Environment and Sustainability	Responsible for the provision of support services for maintenance dredging activities, to implement regulatory and internal governance requirements, including Environmental Policy, Strategy and Environmental Management System (EMS) framework and provision of Regulatory Approvals.	Executive General Manager Safety & ESG
Environment Superintendent	Preparation and development of the LMDMP and other supporting documentation in accordance with MDS and other best practice frameworks. Ensure environmental management, monitoring, reporting and auditing responsibilities are met.	Manager Planning Environment & Sustainability
Environmental Specialist	Assist in development, implementation and revision of LMDMP, EMP and associated documents, review of compliance, and management documents. Responsible for monitoring of EMP implementation and compliance with approval conditions.	Environment Superintendent
Environmental Specialist Monitoring and Measurement	Responsible for the implementation of the monitoring procedure. Coordination of environmental monitoring programs and data.	Environment Superintendent
Employees / Contractors	Responsible for following this EMP	Specialist - Harbours & Channels

Role	Responsibility	Reporting to
Environment Emergency Hotline (07) 4976 1617	General and after hours contact for the GPC Environment team	Environment Superintendent

5.8 Contractor Management

As the operator of the dredger, PBPL are engaged by GPC as a Contractor. GPC has obligations to ensure that the activities undertaken by, or on its behalf, do not present unacceptable risks to the environment and are undertaken in a lawful manner. To ensure the activities of Contractors are identified, assessed and managed the following Contractor management controls are in place:

(a) pre-qualification evaluation;

(b) Procurement Policy;

(c) Environmental Standards;

(d) induction;

(e) regular communication between GPC and the Contractor;

(f) audits and inspections; and

(g) incident investigations.

5.9 Environmental Monitoring

It is a requirement of the EA that the environment monitoring program must include at least the following aspects:

(a) significant and sensitive receptors in the port area are identified and mapped;

(b) environmental aspects and potential impacts are identified;

(c) all contaminant releases are monitored;

(d) the methods for collection and analysis of samples (including specific areas to be monitored, when monitoring is undertaken and duration of monitoring);

(e) the methods of analysing the data and responding to the results to ensure compliance with the conditions;

(f) long term ecological impacts associated with dredging operations are monitored;

(g) reporting intervals;

(h) review of environmental performance is undertaken after each campaign.

To achieve the above, compliance is required with the three tiers of documentation for maintenance dredging at the PoG which includes this EMP and its associated management documents, the LMDMP and the Monitoring Procedure.

The long-term monitoring schedule (the Monitoring Program) is provided in the LMDMP. The Monitoring Program in alignment with the EA requirements takes into account modelling outputs and impact assessment outcomes as well as the outcomes of previous monitoring and also focuses on building a baseline ambient dataset.

The Monitoring Procedure (MP) has been developed to articulate the monitoring program and implements the relevant components of the Long-term Monitoring Schedule for each maintenance dredging campaign.

This EMP enacts the Tide Island In-Channel placement trial which requires the *Port of Gladstone Maintenance Dredging Alternative Disposal Monitoring* to be implemented to determine its performance when this option is used. For In-Channel placement provision of a statement from a suitably qualified person demonstrating the continued placement of material at the In-Channel dredge material placement sites will not cause environmental harm is require at the end of the campaign. If Tide Island In-Channel placement trial (which may be implemented over multiple campaigns) is successful then this will become a routine option for future dredging campaigns.

Environmental monitoring informs adaptive management, compliance and performance review, risk assessment and continual improvement processes for activity management as detailed by this EMP (Section 6) and the LMDMP.

GPC has a monitoring schedule which records monitoring obligations and ensures that they are implemented.

Monitoring programs for infrequent maintenance dredging (not covered by the scope of this EMP) of additional infrastructure are developed and documented in the relevant maintenance documentation developed specifically for the works.

The *TSHD Brisbane* monitors operational aspects of the activity, including effectiveness of controls and equipment.

5.10 Measures, Plant & Equipment

GPC will install, maintain and operate all relevant measures, plant and equipment in a way which ensures compliance with the conditions of this EMP and relevant approvals. There will be no change, replacement, alteration or operation of any plant or equipment if the change, replacement, alteration or operation will increase or is likely to substantially increase the risk of environmental harm during works.

All vessels, structures, plant and equipment associated with the In-Channel MRA must be lit/marked in accordance with the following specifications and requirements such that undertaking the construction works does not cause a risk to safe navigation of ships.

Gladstone Port Procedures, Standard for Commercial Marine Activities Gladstone Region, as well as appropriate legislative requirements for operational marine works being conducted by vessels in the Port of Gladstone. Lighting provided must not obscure, disguise or otherwise interfere with the effectiveness of navigational lighting.

The use of the In-Channel MRA must not damage or interfere (physically or by electrical or electro-magnetic emissions) with any aid to navigation. In the event that damage or interference is caused to any aid to navigation, the Regional Harbour Master (Gladstone) must be immediately contacted on (07) 4971 5208 or gladstone.maritime@msq.qld.gov.au, and at the applicant's cost the damage or interference must be promptly repaired, replaced or interference removed.

It is the Contractor's responsibility to ensure that they install, maintain and operate all relevant measures, plant and equipment utilised in their scope of works in order to ensure compliance with the conditions of this EMP, associated plans and relevant approvals.

5.11 Environmental Training

GPC ensures that Employees and Contractors working at GPC facilities have received the appropriate level of environmental training and that all relevant records are retained in accordance with the GPC's Learning and Development requirements.

GPC Employees have training and awareness delivered in a variety of ways such as Inductions, and mandatory training.

GPC shall ensure that relevant Employees (Refer to Table 3) are aware and are familiar of the requirements of this EMP and its associated documents.

It is the Contractors responsibility to ensure that all dredging personnel, including subcontractors, are:

(a) suitably trained for any and all activities for which training is required in order to ensure legislative compliance; and prevent environmental harm during normal operation and in emergencies;

(b) read, understand and apply the requirements outlined in this EMP and its associated approvals.

Untrained persons must remain under the close supervision of a suitably trained person.

Training records shall be maintained and made available to GPC on request.

5.12 Environmental Audits and Inspections

Internal auditing may be undertaken to confirm that activities are carried out in accordance with the defined requirements set out in this EMP and relevant approvals. Audits are initiated and completed by the GPC Environment team or by a suitably qualified auditor nominated by the GPC Environment team. Audit reports may be provided to GPC regulators as and when required.

If requested by GPC, Regulators and GPC Employees will be afforded access to witness, inspect, examine or audit any part of the Contractor's operations, including any placement activities, monitoring activities, equipment and any records. If requested by a regulatory agency, nominees (at least two) of the relevant agency will be afforded access to witness, inspect, examine or audit any part of the operations. GPC and the contractor will provide all reasonable assistance to inspectors and auditors and comply with any request to audit or inspect any part of the activity.

GPC shall carry out periodic inspections. Records of these inspections along with any corrective or improvement actions arising from inspections or audits will be entered into GPC's incident management system SAI360.

GPC conducts an annual Maintenance Dredging Environmental Performance Internal Audit, post dredging as part of the *Procedure for scheduling and reporting the annual State-wide maintenance dredging program by TSHD Brisbane*, Refer to Section 3.1.

The audit conducts a review of:

(a) monitoring performance (Impact and Long Term) as required by the LMDMP;

(b) volumes (expected vs actual);

(c) urgency (factors outside GPC's control);

(d) Incident and Complaints; and

(e) approvals and EMP specific Issues / compliance.

The audit will trigger a review of:

- Specific aspects of the Aspects and Impacts (A&I) Register, refer to Section 6.
  - It will ensure that an annual review of the A&I Register occurs at the same time each year in alignment with the audit.

The audit may trigger a review of:

- LMDMP Impact and / or Long term monitoring plan in the LMDMP, in the following circumstances:
  - if there is insufficient understanding obtained from the current monitoring;
  - if there is an incorrect scope of monitoring to test the hypothesis; or
  - if there is a change in the risk that would warrant an increased monitoring focus.
- Ecological / Environmental Timings for the Scheduling of the *TSHD Brisbane*; and
- GBRMP Risk assessment change for the Scheduling of the *TSHD Brisbane.*

The audit may initiate a continuous improvement administrative practice.

5.13 Complaints

There are several ways that GPC can become aware of environmental complaints, this includes notification from terminal customers, Employees, Contractors, community members and regulators.

The Environmental Complaints Management Procedure #1044716 details how to notify, identify and escalate, respond to and review complaints ensuring effective complaints handling. Complaints received will be entered into SAI360. The records in SAI360 will include all relevant details of the incident and/or complainant, details of any immediate corrective actions, investigations and/or monitoring undertaken, conclusions formed and improvement actions identified to reduce the risk of reoccurrences.

GPC's Environment Superintendent and Specialist - Harbours & Channels must be notified by GPC Employees and/or the engaged Contractor on receipt of a complaint regarding perceived or real environmental nuisance or harm as a result of an activity specific to the works covered by the scope of this EMP and any other associated works immediately.

The following details must be collated for all complaints received. GPC will provide this information to DES on request:

(a) time, date, name and contact details of the complainant;

(b) reasons for the complaint;

(c) any investigations undertaken;

(d) conclusions formed; and

(e) any actions taken to resolve the complaint.

5.14 Incidents

GPC's Environment Superintendent and Specialist - Harbours & Channels must be notified after GPC and/or engaged Contractor has become aware of any non-compliance specific to activities covered by the scope of this EMP including any other dredging associated works. Incidents include monitoring exceedances and administrative non-compliances with the EMP and associated documentation.

If at any time during the course of the activity, an environmental incident occurs or an environmental risk is identified, all reasonable and practical measures must be taken immediately by GPC to mitigate the risk or impact.

This notification is to take place in accordance with the following methods and timeframes:

(a) verbal notification immediately after occurrence of incident to GPC's Environment Superintendent;

(b) written notification within 24 hours of occurrence of incident to GPC's Environment Superintendent.

At all times GPC Environmental Hotline (07) 4976 1617 is to be notified of any occurrence of any environmental complaints

GPC must notify DES (soon and practical but within 24hrs) and / or DCCEEW (within 72 hours) of any incident resulting from activities undertaken as part of the works which:

(a) causes or has the potential to cause environmental harm;

(b) is unlawful (e.g. works outside approved footprints);

(c) involves the release of a contaminant (not allowed by approvals);

(d) identifies a new environmental risk (e.g. marine pest incursion);

(e) adversely impacts an environmental value (e.g. marine megafauna injury or death);

(f) involves a cultural or shipwreck heritage find;

(g) is a breach of a condition of an approval; or

(h) is not in accordance with the relevant approvals and /or permits.

GPC (or the Contractor) must telephone DES's Pollution Hotline (1300 130 372) immediately after becoming aware of any incident involving injury, fatality or other harm to any species of turtle or marine mammal during the activity. GPC in addition will report the injury or death to DCCEEW within 72hr of detecting the incident.

Retrieved turtle carcasses (and parts of) shall be immediately notified to DES on the 1300 130372 to allow prompt collection by DES for analysis.

For oil spills into marine waters MSQ shall be notified by the Contractor of marine spills using a POLREP form in compliance with Appendix B – MSQ First Strike Response Plan – Port of Gladstone & POLREP (Maritime Safety Queensland Marine Pollution Report).

In the event of a pest incursion immediately, follow contact details shown in Table 4

Table 4 Biosecurity Incident Reporting

Incident Type	Responsible Regulator	Contact Details
Pest incursions or quarantine breaches – flora and fauna	DAFF (Federal Gov)	1800 798 636 or 0447 735 926
Declared Pests known or suspected	DAF (State Gov)	132 523 or 0438 646 108

If GPC and/or engaged Contractor becomes aware of material environmental harm or serious environmental harm as a result of carrying out the activities covered by the scope of this EMP or other associated works, then the said activity(s) must be ceased immediately.

At all times GPC Environmental Hotline (07) 4976 1617 is to be notified of any occurrence of:

a) release / spill of contaminants (e.g. fuel / chemicals / sewage) greater than 20L to Land;

    a. Land is defined as where not within a containment system.

b) release / spill of contaminants (e.g. fuel / chemicals / sewage) any amount to water;

c) non-compliance with this EMP

Incidents are recorded in the SAI360 system and holds all relevant details of the incident including immediate corrective actions, investigations and/or monitoring undertaken, conclusions formed and improvement actions identified to reduce the risk of reoccurrences.

Written advice will be provided by GPC (or the Contractor) within 14 days to the relevant administering authorities in accordance with the conditions of the appropriate approval (Table 2). The following details may be required:

(a) name of the registered operator, including development approval number;

(b) the name and telephone number of a designated contact person;

(c) the location (GPS) of the release/event;

(d) the date / time of the release/event;

(e) the details including the environmental risk of the release /event;

(f) the suspected cause of the release/event;

(g) the sensitive receptor(s) that may have been impacted;

(h) a description of the resulting effects of the release/event;

(i) the results of any sampling performed in relation to the release/event;

(j) actions taken to minimise or mitigate any environmental harm and or environmental nuisance and or environment risk caused by the release/event;

(k) the success of the actions taken; and

(l) any additional proposed actions to prevent a recurrence of the release/event.

GPC's Incident Management and Investigation Procedure #1075526 is used to guide incident reporting, external notifications, investigations and corrective actions including record keeping requirements. The Contractor's incident reporting procedure shall be included in the Contractor's EMP and must include the requirements outlined in this EMP.

GPC also records and communicates the number and type of incidents internally through weekly, monthly and annual reports.

5.15 Emergency Preparedness

GPC has developed the Risk Management Policy, Business Resilience Standard #852778 and Crisis Management Procedure #872678 which provides a framework for ensuring GPC develops and maintains capacity to efficiently prepare for, respond to, and recover from, an emergency, major business disruption and/or crisis event.

Under a Deed of Agreement between Maritime Safety Queensland (MSQ) and GPC, GPC is responsible for first-strike response to oil spills, within the boundaries of the port, in accordance with the MSQ First-strike Oil Response Plan attached in Appendix B.

All emergencies and incidents must be reported as per Section 5.14 of this plan. However in the event of an oil/hazardous substance spill to water, the Harbour Master (07 4973 1200) is to be contacted immediately. Secondary contact is to then be made with the First Strike Oil Response Team Leader on 0409 629 413.

The Contractor's Emergency Procedures are detailed in their EMP.

(a) Contingency Planning

Although management measures cover most potential impacts, contingency arrangements are required in the event of emergency or abnormal operations. These may include but are not limited to:

(i) transport in adverse weather conditions (e.g. Cyclones) causing an emergency release of material; and

(ii) Marine incidents.

In abnormal operating circumstances, the Environment Superintendent and Specialist - Harbours & Channels shall be contacted to formulate and advise the Vessel Master of GPC's preferred course of action to minimise environmental harm. It is noted that the Vessel Master has ultimate responsibility for the vessel and crew, so will make decisions based on risk with consideration to GPC's advice. The Vessel Master is also responsible for consulting with MSQ and ensuring their requirements are met.

5.16 Records

All records required by this EMP, associated documents and the relevant approvals must be kept for at least ten (10) years. Records will be kept in either of the following secure repositories:

(a) GPC's SAI360 System – and/or;

(b) GPC's Document Management System – EDocs.

All records must be provided by the Contractor to GPC upon request and/or at the completion of dredging activities. Records shall be retained for verification and audit purposes. Record Keeping requirements are displayed in Table 5 and information to be provided to external parties is outlined in Table 6.

Table 5 Record keeping

Record Type	Responsible Person	Details
Contractor Management	GPC	Refer to Section 5.8
Weekly plotting sheets or a extract of the ships log, certified by the vessel captain.	Contractor	• The dates and times of each relocation run commenced and finalised; • the position determined by GPS of the vessel at the beginning and end of each relocation run, including the path of each run (for both Off-Shore MRA and In-Channel MRA); • the volume of relocated material (in-situ cubic meters) placed and quantity in dry tonnes for the specified operational period and compared to the total amount permitted under the permit on a daily

Record Type	Responsible Person	Details
		basis; area(s) dredged in relation to the approved footprint of works (using GPS • the person(s) responsible for the operation of the vessel at any time during relocation activities. • the person(s) with their relevant qualifications undertaking the marine species observations, the marine species observed within the monitoring zone for each vessel movement, including, for each sighting, the date, time, species (or nearest identification), location (GPS co-ordinates) and approximate distance of the marine species from the vessel, and the action taken to comply. • the person(s) responsible for the operation of the vessel at any time during relocation activities.
Environmental monitoring Records	GPC	Refer to Section 5.9 and the monitoring procedure
Measure Plant and Equipment	Contractor /GPC	The Contractor will keep operational records, GPC will keep records for monitoring equipment. Refer to Section 5.10
Training Records	Contractor / GPC	Refer to Section 5.11
Incidents	Contractor	Notifications, Investigations, Reports.
Complaints	GPC	Refer to Section 5.13
Emergencies	Contractor / GPC	Relevant decision making documentation and any investigations / reports
Waste	Contractor	Regulated Waste Tracking and Sewage Waste records Refer to Section 6.6(b)
TACC	GPC	TACC record keeping including but limited to, Terms of Reference (TOR), TACC membership and annual meeting minutes Refer to Section 5.17(a)
Internal audits and inspections	GPC	Refer to Section 5.12
Annual Performance audit	GPC	Refer to Section 5.12

Record Type	Responsible Person	Details
Aspects and Impacts Register	GPC	Refer to Section 0
PBPL *TSHD Brisbane* EMP	Contractor	Refer to Section 3.1(b)
Alternative Methodologies	GPC	Document performance of alternative dredgers and methodology (when used).

Table 6 Provision of information to external parties

Information Type	External Party	Details
Notification of commencement of dredging	DES	Five (5) days prior, including information on the area(s) to be maintained and location(s) of material relocation with evidence of any applicable approvals for relocation.
Notification of the commencement of In-Channel MRA use and Notification of the completion of In-Channel MRA use	MSQ	At least two (2) week prior - Provide written notice to the Regional Harbour Master (Gladstone) (gladstone.maritime@msq.qld.gov.au), when the activity is scheduled to commence. Within two (2) weeks of completion of activity - Provide written notice to the Regional Harbour Master (gladstone.maritime@msq.qld.gov.au), when the activity has been completed. Each notice must state this application number, the location and name of registered place and the condition number under which the notice is being given.
Authorisation of the EMP and Monitoring Procedure	DCCEEW	Refer to Section 3.2 and 5.18
Submission of the EMP and Monitoring Procedure	DES	Twenty (20) days prior Refer to Section 3.2 and 5.18
Submission of Operational Plan for In-Channel placement (encapsulated in EMP)	DES	Twenty (20) day prior which includes: 1. Volume of material to be deposited in tonnes (Section 2.1). 2. A copy of the land-use approval for the deposition of the dredge material at the In-Channel dredge material placement sites (Section 5.3) 3. Details of the material placement (Section 4.2): a) type of equipment to be used in placement of dredge material; b) methods to be utilised for transporting dredged material; and c) method for deposition of dredge material. 4. Except the first instance of placement, a review of previous monitoring data and impacts to sensitive

Information Type	External Party	Details
		receptors carried out by a suitably qualified person (Section 5.9). 5. Monitoring plan prepared by a suitably qualified person to monitor the impacts to sensitive receptors from the placement and material which has moved from the placement site (Section 5.9). The monitoring plan must: a) identify and map significant and sensitive receptors in the port area; b) identify environmental values and potential impacts; c) monitor all releases; d) detail the methodology to be used for the collection and analysis of samples (including specific areas to be monitored, when monitoring is to be undertaken and duration of monitoring); e) detail the methodology for analysing the data and responding to the results to ensure compliance with conditions; f) monitor long-term ecological impacts associated with dredging operations area; and g) identify reporting intervals. 6. Statement from a suitably qualified person demonstrating the continued placement of material at the In-Channel dredge material placement sites will not cause environmental harm (Section 5.9).
Submission of Marine Execution Plan (MEP) for In-Channel MRA	MSQ	Submit at least twenty (20) days prior to the Marine Execution Plan to the Regional Harbour Master (Gladstone) (gladstone.maritime@msq.qld.gov.au).
Provision of approved MEP for In-Channel MRA	GPC Planning	Prior to works commencing
Submission of Emergency Management Plan for approval for In-Channel MRA	GPC Planning	Prior to works, supply and Emergency Management Plan for review and approval.
Submission of Dredge Management Plan for In-Channel MRA	GPC Planning	At least ten (10) days prior to commencement of activity, submit a Dredge Management Plan for review and approval.
Incident Notification and Reports on a breach of a condition	DCCEEW, DES, DAFF, DAF, GPC Planning (as required by obligations)	Notifications, Investigations, Reports. Refer to Section 5.14
Notification if material or debris falls or is	GPC Planning	Upon being made aware, notification is to be made and the material removed at own expense.

Information Type	External Party	Details
deposited outside lawful footprint		
Notification of the conclusion of activities under SD2018/3762V2	DCCEEW	Within five (5) days of the date of placement activities being concluded.
Compliance Report	DES	A report submitted to DES within 40 business days of completion of all monitoring required by EA (EPPR00570813). The report must include areas and volumes that were maintained, where it was placed, reportable incidents, all monitoring results with summaries, graphic interpretations and an assessment of these results in relation to the conditions of the EA and environmental impacts. In respect to the receiving environment monitoring program, reports are to be provided as detailed in that plan. Refer to Section 5.9 and the monitoring procedure.
Final bathymetric survey	DCCEEW and Australian Hydrographic Office	The permit holder must ensure that a suitably qualified person undertakes a bathymetric survey of the disposal site: a. prior to the commencement of dumping activities authorised under this permit b. within one month of the completion of all dumping activities authorised under this permit. Within 2 months of the final bathymetric survey being undertaken, GPCL must provide a digital copy of each of the bathymetric surveys to the Australian Hydrographic Office, Locked Bag 8801, Wollongong, NSW, 2500 or via email at: datacentre@hydro.gov.au Provide a report on the bathymetry to the department within 2 months of the final bathymetric survey being undertaken. • The report must include a chart showing the change in sea floor bathymetry as a result of dumping activities and include a reliable estimate of the volumes of dumped material that appear to have been retained within the Off-shore MRA.
In-Channel placement total volume at end of works	DES	Within two (2) weeks, the total volume of material disposed as In-Channel placement near Tide Island must be provided to palm@des.qld.gov.au or mailed to: Department of Environment and Science Permit and License Management Implementation and Support Unit GPO Box 2454
In-Channel placement	DES	Prepare a hydrographic survey plan by a registered surveyor in accordance with *Standards for Hydrographic Surveys within*

Information Type	External Party	Details
hydrographic survey		*Queensland Waters* to a Class B standard of In-Channel MRA and the immediate adjacent area likely to be affected by the placement. (b) The hydrographic survey plan must be provided to palm@des.qld.gov.au or mailed to: Department of Environment and Science Permit and License Management Implementation and Support Unit GPO Box 2454 Brisbane Qld 4001
RPEQ Certification of in-channel MRA	GPC Planning	Upon completion and within 14 days supply a RPEQ certification of the In-Channel placement area stating it is 'fit for purpose'
Clear seabed for In-Channel MRA	GPC Planning	Upon completion, provide statement that the sea bed is clear of any foreign materials (not approved as part of this activity).
Notification of Practical completion	GPC Planning	Completion of works within Port Limits within 14 days of practical completion and certify that the site is fit for purpose.
IMO	DCCEEW	To facilitate annual reporting to the International Maritime Organization, GPCL must report to the Department by 31 January each year, including a final annual report on the day of the expiry of this permit or on the day of the expiry of the permit or completion of all dumping activities under this permit, information at Appendix 2 to the permit, or in a format as approved by the Department.
Performance Report to QPA	QPA	Risk Assessment for the Scheduling of Maintenance Dredging and comparative analysis of dredging performance to be provided to Queensland Ports Association. Refer to Section 3.1
GBRMP Risk Assessment	PBPL	Refer to Section 3.1, provided to PBPL and placed on web
Scheduling of the TSHD Brisbane	PBPL	Refer to Section 3.1, provided to PBPL
GPC documentation and monitoring reports on the GPC website	Public	Refer to Section 5.17

5.17 Communication and Consultation

The EGM Marine Operations Manager is the main point of contact with the Contractor, and is supported by the Harbours and Channels Specialist and the Environment team to achieve compliance with the EMP, associated documents and permits.

Daily interactions occur between GPC and the Contractor, GPC meetings will be held as required to track progress and discuss environmental issues including adaptive management with the Environment team.

GPC is the main point of contact for external parties. However as the Contractor, will initiate emergency response calls, incident and complaint notification to GPC, investigation and reporting for works under their contract scope and the scope of their EMP. The Contractor will initiate emergency response calls for any matters outside of their scope of works in the event that GPC main point of contact is unavailable.

(a) Technical Advisory Consultative Committee (TACC)

GPC established a TACC for the purpose of maintenance dredging in 2000. The TACC includes a wide cross section of stakeholders as per the NAGD. The role of the TACC is to provide external advice and recommendations to ports on environmental, social and economic issues and are a way of ensuring that a range of stakeholders are consulted..

GPC facilitates annual meetings with the TACC where the outcomes of the activity and associated monitoring programs are reviewed, discussed and refined.

A significant amendment to this EMP or associated documents, including a significant environment change in risk will be communicated to the TACC.

More information is provided in the LMDMP and the TACC Terms of Reference.

(b) Access to reports and data for maintenance dredging

GPC publishes the current approved version of the LMDMP, EMP and Monitoring Procedure on the GPC website for public access.

In accordance with Principal 16 of the MDS, GPC also provides reports prepared in accordance with statutory approval requirements for the most recent campaign on GPC's website along with copies of the most recent monitoring reports and the SAP and implementation report.

The LMDMP also commits for transparency in regards to the TACC, so in response the TACC Terms of Reference and meeting minutes will be displayed on the website.

To ensure accuracy and currency of reports and data on the web is achieved, GPC has implemented an 'Access to Report and Data Process'

In addition to providing access to report and data on the GPC website, GPC also has a data request process established for the external dissemination of environmental monitoring data and reports.

5.18 Review

This EMP, its operation and implementation, and its associated documents will be reviewed prior to each campaign or annually or as a result of:

(a) findings of internal and external inspections and/or audits;

(b) changes in legislation or approvals;

(c) incident and / or complaint investigations; or

(d) in the event a performance indicator (Section 6) is not met.

The review process is necessary to ensure currency, relevance and accuracy. Revisions are kept as a new version in GPC's document management system, eDocs, and must be communicated to all relevant GPC Employees, engaged Contractors and administering authorities (DES, DCCEEW and GPC Planning).

Any changes to GPC's EMP or MP that is likely to have a new or increased impact, or reduce the public accessibility of information or inconsistent with the LMDMP shall be approved by DES, DCCEEW and GPC Planning prior to implementation and communicated to the TACC. In this instances GPC must:

(a) notify the regulators in writing that the plan or procedure has been revised and provide the Department with an electronic copy of the revised plan (in track changes for DCCEEW), including a covering letter outlining the changes;

(b) implement the revised plan or procedure when approved by the regulators from the date of approval; and

(c) for the life of this permit, maintain a record of the reasons the permit holder considers that taking the action in accordance with the revised plan or procedure would not be likely to have a new or increased impact or reduce the public accessibility of information.

GPC may make administrative changes to the EMP or MP without submitting it for the approval, if the taking of the action in accordance with the revised monitoring and management plan will not have a new or increased impact on the environment or reduce the public accessibility of information. If GPC makes this choice, they must:

(a) notify the department in writing that the EMP or MP has been revised and provide the department with an electronic copy of the revised plan showing the proposed changes in track mode, accompanied by a covering letter specifying the changes made and the reasons that the permit holder considers that taking the action in accordance with the revised plan would not be likely to have a new or increased impact on the environment and/or reduce the public accessibility of information

(b) implement the revised monitoring and management plan no sooner than 14 days after the date of submission unless the department informs GPC that the change requires approval.

(c) for the life of this permit, maintain a record of the reasons the permit holder considers that taking the action in accordance with the revised EMP or MP would not have a new or increased impact on the environment and/or reduce the public accessibility of information.

DCCEEW might request GPC to make specific modifications and revision of the EMP or Monitoring Procedure if it is deemed these are necessary and desirable to protect the environment. As described above, such changes must be submitted for approval with the DCCEEW specific amendments / revisions for approval and GPC must implement this revised version.

Each version of the EMP and MP approved or adopted for implementation must be published on the website within 30 days of its approval or adoption for implementation, and must include:

(a) the date of this permit;

(b) the date that a revised version of EMP or MP is approved by DCCEEW; and

(c) the date that a revised version EMP or MP may be implemented for administrative changes not requiring DCCEEW approval.

The permit holder must ensure that each version of the EMP and MP remains published on the website until the end date of validity of the permit.

A copy of this EMP and its associated LMDMP and MP must be submitted to DES and GPC Planning at least 20 business days and 10 (ten) days respectively prior to the commencement of dredging and amended with any comments made by DES. If the Plan, is amended, with changes other than administrative edits, it must be provided to the administering authority at least 20 business days prior to commencing activities under the amended Plan.

These changes will be captured in Section 7 – Document Version Control, as 'Material Amendment' and Administrative Amendment' respectively.

6 Environmental Risk Management

This EMP, its operation and the environmental aspects addressed in this EMP are as follows.

The management of environmental aspects associated with the operation of the *TSHD Brisbane* is also described in the Contractor's EMP.

6.1 Acid Sulfate Soils

No On-Shore disposal will occur under the scope of this EMP.

If disturbance or oxidisation of Acid Sulfate soils is suspected then the affected soil must be treated and thereafter managed (until the affected soil has been neutralised or contained) in accordance with the current *Queensland Acid Sulfate Soil Technical Manual: Soil management guidelines*, prepared by the Department of Science, Information Technology, Innovation and the Arts, 2014. Includes certification by an appropriately qualified person, confirming that the affected soil has been neutralised or contained, is to be provided to palm@des.qld.gov.au or mailed to:

Department of Environment and Science
Permit and Licence Management
Implementation and Support Unit
GPO Box 2454
Brisbane Qld 4001

6.2 Air Quality and Emissions

The release of airborne contaminants from operational activities poses a potential environmental risk to operators, nearby neighbours and the surrounding environment.

Objectives	To avoid causing an environmental nuisance at any nuisance sensitive place. Compliance with permit conditions and management plans.	
Potential Impacts	• The release of toxic, noxious or offensive odours, airborne contaminants and particulate matter resulting from the works may cause an environmental nuisance sensitive place. • Unmitigated energy consumption and greenhouse gas emissions.	
Control Strategy	• Management of plant and equipment. • Management of wastes. • Management of complaints and incidents.	
Actions	1	To reduce the creation of odours or fumes, plant and equipment should be serviced and inspected appropriately by the Contractor.

	2	The Contractor will not burn or store solid wastes on the vessel or an associated facility long enough for it to decompose and cause odour nuisance.
	3	All complaints or incidents that are received by the Contractor shall be reported to GPC. GPC will report these as per Sections 5.13-14.
	4	The Contractor will schedule maintenance and / or corrective actions as required for equipment issues
	5	Vessel log books are maintained by the Contractor and are available to GPC.
Performance Indicators	1	No air quality related complaints.
	2	No noxious or offensive odours or fumes that impede works being completed safety and / or that causes environmental nuisance at a nuisance sensitive place.

6.3 Noise, Vibration and Lighting

Activity involves the use of powered mobile equipment operating 24 hours, seven (7) days a week for the duration of the works.

Objectives	To avoid causing an environmental nuisance at any nuisance sensitive place. Compliance with permit conditions and management plans.	
Potential Impacts	• Noise, lighting and vibration from activities may cause environmental nuisance as described in the EP Act.	
Control Strategy	• Management of plant and equipment. • Management of complaints and incidents.	
Actions	1	To manage the creation of noise and vibration plant and equipment should be serviced and inspected appropriately by the Contractor.
	2	Noise suppression devices fitted to plant and equipment if possible / practical.
	3	All complaints or incidents that are received by the Contractor shall be reported to GPC. GPC will report these as per Sections 5.13-14.
	4	Vessel log books are maintained by the Contractor and are available to GPC.
	5	Noise or vibration monitoring may be undertaken at GPC's discretion or in accordance with approval conditions to investigate a complaint or incident.

Performance Indicators	1	No noise, vibration or lighting complaints or related incidents associated with the activity.

6.4 Heritage

Discharging "heritage duty of care" by ensuring that known Aboriginal cultural heritage and shipwreck heritage will not be harmed during works.

Objectives	• Ensure Indigenous and European Heritage items / areas are not impacted. • Compliance with permit conditions and management plans.	
Potential Impacts	• Non-compliance with Aboriginal Cultural Heritage Act 2003 and Historic Shipwrecks Act 1976 may lead to harm of heritage. This may lead to fines and /or prosecution under these Acts.	
Control Strategy	• Works conducted by the contractor within approved locations to declared depths.	
Actions	1	If heritage items are observed / suspected during works, the activity will cease immediately and a reasonable exclusion zone designated around the item. An approved representative of the appropriate claimant group and / or regulatory body will assess any potential heritage item in situ.
	2	Works conducted within approved locations and to declared depths.
	3	All complaints or incidents that are received by the Contractor shall be reported to GPC. GPC will reported these as per Sections 5.13-14.
Performance Indicators	1	No heritage complaints or incidents associated with the activity.
	2	No works conducted outside approved bounds.

6.5 Biodiversity

(a) Fauna

Activity has the potential to have an impact on marine megafauna. A number of these species are listed species under legislation as such the works need to be conducted in a way that ensures that there is none to minimal impact.

Objectives	• Minimisation of impacts on marine megafauna. • Compliance with permit conditions and management plans.
Potential Impacts	Harm to marine mega fauna may affect the sustainability and diversity of their populations in the PoG and the broader area.

Control Strategy	• Marine spotters • Management of wastes • Use of the *TSHD Brisbane*	
Actions	1	Prior to the commencement of relocation activities, the Contractor (who will be a suitably qualified marine species observer) will observe for marine megafauna in accordance with GPC's sea dumping permit requirements. 30 minutes prior to, and throughout the relocation activities. A check must be undertaken using binoculars from a suitable observation platform and scan the entire area for marine species in the monitoring zone (within 300 m of the vessel). At least every 30minutes, commencing 30 minutes prior to and continuing through the relocation activities. Relocation will not commence or pause (when safe and practical to do so), if observed after commencement until either 30 minutes after the time when the last marine species has left the monitoring zone of its own accord or the vessel has moved to another area of the MRA where there are no marine species within the monitoring zone of the vessel's new location. All practical efforts will be made to avoid interaction between the vessel and marine mega fauna.
	2	The *TSHD Brisbane* is fitted with turtle deflectors. This equipment should be serviced and inspected appropriately by the Contractor. The Contractor should advise GPC immediately if fauna exclusion devices are removed or damaged in a way that could decrease their effectiveness. The marine spotters shall compile a daily log of marine species observed within the monitoring area, including date/time/location (GPS), direction/ approximate distance/ individual or cluster and action taken. Refer to 3.15 Record Keeping Vessel log books are maintained by the Contractor and are available to GPC.
	3	All complaints or incidents that are received by the Contractor shall be reported to GPC. In the evnet of detected injury or death of marine species potential associated with the activity. The date, tuime, location (GPS coordinates) and nature of each detected injury to, or death of, the marine species and the species involved (if known) must be recorded. GPC will reported these as per Sections 5.13-14.
	4	The *TSHD Brisbane* has developed the following procedure for response to marine megafauna incidents: DOCSCQPA-#1004505-ENV procedure Marine Fauna Incident Response Procedure for *TSHD Brisbane* 18/11/2013

	5	Where practical and safe all turtle carcasses and / or parts of turtle carcasses (of any species) that are observed shall be retrieved and appropriately stored.
	6	In the event that two or more of any endangered or vulnerable species of marine megafauna are fatally injured on any two (2) out of three (3) consecutive days, the dredging operation must stop and not re-commence until consultation with DES has occurred and direction has been given by DES to allow re-commencement.
	7	In the event of marine megafauna incidents, GPC shall follow the Flora and Fauna Management Guideline #1257595.
Performance Indicators	1	No fatalities or injuries of marine megafauna associated with the works.
	2	No fauna related complaints or incidents associated with the activity.

(b) Flora

The activity has the potential to directly and indirectly impact on marine flora. Marine flora can consist of seagrass, mangroves, salt couch, existing sporadically or as a part of a larger habitat.

Objectives	• No direct or indirect impacts on marine flora outside of the lawful works footprint. • Compliance with permit conditions and management plans.	
Potential Impacts	• Impacts on flora species may affect the sustainability and diversity of flora and fauna populations in the PoG and the broader area.	
Control Strategy	• Activity is undertaken within approved footprint • Monitoring and management of maintenance and relocation plumes. • Use of the *TSHD Brisbane*	
Actions	1	The Contractor will restrict disturbance to the approved footprint of activity.
	2	GPC have conducted plume modelling based on the *TSHD Brisbane* to identify potential risks.
	3	GPC will monitor the activity in accordance with the MP and manage the Contractor's activity in accordance with management triggers.
	4	All complaints or incidents that are received by the Contractor shall be reported to GPC. GPC will report these as per Sections 5.13-14.

	5	The *TSHD Brisbane* is fitted with an anti-turbidity (green) valve to minimise turbidity.
	6	The Contractor will schedule maintenance and / or corrective actions as required for equipment issues including turbidity minimising equipment.
	7	The Contractor should notify GPC immediately if there are issues impeding the effectiveness of turbidity minimising equipment on the vessel.
	8	GPC will monitor sensitive receptors in accordance with the LMDMP.
	9	Vessel log books are maintained by the Contractor and are available to GPC.
Performance Indicators	1	No activity related exceedances of the turbidity and BPAR triggers.
	2	No works undertaken outside of approved footprint.

(c) Biosecurity

Introduction of marine pests have the ability to adversely affect the biodiversity of the PoG. Biosecurity Queensland are responsible for managing known marine pests in Queensland and GPC has obligations and responsibilities to Biosecurity Queensland under the *Biosecurity Act 2014*. The Department of Agriculture and Water Resources administer the *Biosecurity Act 2015*, which deals with new pest incursions, and places obligations and responsibilities on First Ports of Entry, such as the PoG.

Objectives	• Ensure there is no material or perceived harm from biosecurity risks • Compliance with Regulations and management plans.	
Potential Impacts	• Increased competition, predation or disease will affect existing flora and fauna within the PoG.	
Control Strategy	• Use of the *TSHD Brisbane* • Biosecurity protocols and regulations	
Actions	1	Should a marine pest invasion be noticed by the Contractor, GPC is to be notified as per the incident procedure in Section 3.13. GPC's Environment team will notify regulatory authorities and follow directions given
	2	All complaints or incidents that are received by the Contractor shall be reported to GPC. GPC will report these as per Sections 5.13-14.
	3	The Contractor is to comply with applicable State and Federal Biosecurity requirements.
	4	Should a marine pest invasion be noticed by the Contractor, GPC is to be notified as per the incident

		procedure in Section 3.13. GPC will notify regulatory authorities
	5	GPC will monitor for marine pests in accordance with the LMDMP.
Performance Indicators	1	No marine pest incursion associated with the works.
	2	Appropriate response in the event that a marine pest incursion is detected.

6.6 Waste Management

(a) Hazardous Substances Handling and Storage

Powered mobile equipment used to manage sediment utilises a diesel engine and hydraulic oils. These hazardous substances need to be managed to protect the environment.

Objectives	• Prevent the release of contaminants to the receiving environment; • Manage wastes and spills to prevent environmental harm; • Compliance with permit conditions, Regulations and management plans.	
Potential Impacts	• Poor practices with hazardous substance handling, storage and spill response can lead to marine pollution as well as non-conformance with the Environment Protection Regulation 2000.	
Control Strategy	• To contain and control fuels, oils and greases • To ensure good housekeeping and maintenance of equipment • To clean up spills effectively.	
Actions	1	Spill response procedures are implemented by the Contractor and their staff are suitably trained. Spill response procedure must not cause loss to the environment (e.g. hosing, sweeping)
	2	The Contractor will ensure that spill equipment is available and personnel are familiar with its use.
	3	Regular housekeeping and maintenance of work areas, storage areas, transfer equipment and spill equipment will be undertaken by the Contractor.
	4	The Contractor will ensure that hazardous substances are handled and stored in a manner that prevents environmental harm.

	5	The Contractor will maintain a register of hazardous substances stored / used on the dredge and SDS sheets will be available.
	6	The Contractor will undertake appropriate checks and preventative maintenance of plant and equipment to minimise leaks and spills.
	7	All wastes will be disposed of at the appropriate licensed facility.
	8	Refuelling of vessels must be carried out by licensed person at a licensed re-fuelling facility
	9	All complaints or incidents that are received by the Contractor shall be reported to GPC. GPC will report these as per Sections 5.13-14.
Performance Indicators	1	No incidents or complaints involving Fuel, Oil, Grease or other hazardous substances that cause environmental harm or nuisance.
	2	Effective and efficient clean-up of all spills and removal of contamination.
	3	Correct disposal of contaminated products.

(b) Waste (including Regulated Waste)

There are many waste products generated during the activity and as a result of incidents including general waste and recyclables, water and sewage, chemical and hydrocarbon wastes. Some of these wastes are classified as regulated wastes, as listed in schedule 7 part 1 of the Queensland *Environment Protection Regulation 2000* (the Regulation), and requires appropriate storage, transport, disposal and tracking in accordance with the Regulation.

Objectives	• Undertake appropriate regulated waste management in accordance with the Regulation; • Prevent the release of contaminants to the receiving environment; • Compliance with permit conditions, Regulations and management plans.	
Potential Impacts	• Poor management of wastes can lead to contaminated work areas and possible harm to the wider environment as well as non-conformance with the Regulation and permit conditions.	
Control Strategy	• Undertake appropriate regulated waste tracking • Manage waste generation, storage, transport and disposal	
Actions	1	The Contractor is to keep appropriate tracking records when regulated waste is removed from the vessel or a GPC wharf facility. All regulated waste must be

		transported by licensed Contractors to be disposed at a licensed place.
	2	The Contractor must make appropriate provisions for waste segregation and storage on the vessel and at GPC wharf facilities. The Contractor must ensure that adequate storage capacity is maintained and that no waste remains at GPC facilities at the completion of works.
	3	The Contractor will ensure that wastes are stored, handled, transported and disposed of appropriately.
	4	Any spills shall be cleaned up by the Contractor as soon as practicable.
	5	The Contractor will ensure that regulated wastes are contained and controlled in a manner that prevents environmental harm. All bunding will be appropriately sized for the application and capacity maintained (e.g. kept free of rain water).
	6	Waste must not be burnt.
	7	All complaints or incidents that are received by the Contractor shall be reported to GPC. GPC will report these as per Sections 5.13-14.
	8	The Contractor will undertake appropriate checks of waste storage facilities to minimise leaks or spills and ensure waste is being managed appropriately.
	9	The Contractor is to keep appropriate tracking records when regulated waste is removed from the vessel or a GPC wharf facility. All regulated waste must be transported by licensed Contractors to be disposed at a licensed place.
Performance Indicators	1	No incidents or complaints pertaining to waste management that cause environmental harm or nuisance.
	2	Effective and efficient clean-up of all spills and removal of contamination.
	3	Correct storage, transport and disposal of waste products including tracking for regulated wastes.

6.7 Water Quality

The activity has the potential to impact on water quality, namely through increased turbidity and suspended solids. Appropriate management controls will be in place to ensure that impacts during maintenance and sea relocation do not affect sensitive receptors.

Objectives

- Ensure water quality in the PoG is managed;
- Mitigate water quality risks to sensitive receptors;

	• Compliance with permit conditions and management plans.	
Potential Impacts	• Poor water quality can have a detrimental impact on marine flora and fauna in the PoG. The activity occurs adjacent to sensitive environmental receptors.	
Control Strategy	• Port water quality (turbidity and light/BPAR) is modelled and monitored. • Management triggers are implemented to ensure that turbidity plumes do not impact on sensitive receptors within the PoG. • Management of the activity in accordance with permit conditions and this EMP.	
Actions	1	Hazardous substance waste management is to be conducted in accordance with Section 6.6 above.
	2	GPC have conducted plume modelling and validation sampling based on the *TSHD Brisbane* to identify potential risks.
	3	GPC will monitor the activity in accordance with the MP and manage the Contractor's activity in accordance with management triggers.
	4	All complaints or incidents that are received by the Contractor shall be reported to GPC. GPC will report these as per Sections 5.13-14.
	5	The *TSHD Brisbane* is fitted with a green valve to minimise turbidity.
	6	Sediments to be dredged are tested by GPC in accordance with the NAGD 2009.
	7	Turbidity minimising equipment should be serviced and inspected appropriately by the Contractor.
	8	Vessel log books are maintained by the Contractor and are available to GPC.
	9	The Contractor should notify GPC immediately if there are issues impeding the effectiveness of turbidity minimising equipment on the vessel.
Performance Indicators	1	No activity related exceedances of the turbidity and BPAR triggers.
	2	No unsuitable material (as determined by the NAGD 2009) relocated at sea.
	3	No incidents / complaints pertaining to water quality that are attributed to the activity.
	4	All contaminant spills cleaned up effectively.

6.8 Social

GPC activities and the City of Gladstone are intertwined both geographically and historically. A harmonious relationship is desired for GPC to continue to operate effectively.

Objectives	• Positive public perception and acceptance of GPC activities • Avoid creating environmental nuisance.	
Potential Impacts	• Poor public perception and acceptance could lead to a disconnect between GPC and the community, making operations unwanted and unpopular. • Non-compliance with permit conditions, Regulations and this EMP.	
Control Strategy	• To provide a mechanism to receive public complaints and a process to address them. • Operate in accordance with permit conditionings and this EMP. • Engage the TACC.	
Actions	1	All complaints or incidents that are received by the Contractor shall be reported to GPC. GPC will report these as per Sections 5.13-14.
	2	GPC and the Contractor should operate with due diligence and in accordance with applicable permit conditions and management plans.
	3	GPC to communicate with the TACC as and when required.
	4	Operational and safety requirements considered in the *TSHD Brisbane* scheduling process.
Performance Indicators	1	No public complaints as a result of the activity.

7 Appendices

7.1 Appendix 1 – Related documents

(a) Legislation and regulation

Key relevant legislation and regulation, as amended from time to time, includes but is not limited to:

Type	Legislation/regulation
Federal Acts	*Environmental Protection (Sea Dumping) Act 1981* *Environment Protection and Biodiversity Conservation Act 1999* *Biosecurity Act 2015*
State Acts	*Environmental Protection Act 1994* *Coastal Protection and Management Act 1995* *Fisheries Act 1994* *Biosecurity Act 2014* *Transport Operations (Marine Safety) Act 1994*
Other	International Convention for the Prevention of Pollution from Ships - MARPOL Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter – London Protocol

(b) Gladstone Ports Corporation documents

The following documents relate to this Plan:

Type	Document number and title
Tier 1: Policy	#366016 Environment Policy #924357 Risk Management Policy
Tier 2: Standard/Strategy	#809151 Environmental Management Framework Standard #995910 Safety Environment and Security Standard for Contractors and Port Users #829152 Risk Management Standard
Tier 3: Specification/ Procedure/Plan	#801782 Strategic Environment Plan #146256 EMS Plan #314935 Environmental Monitoring Schedule #934182 Standard for Learning and Development #1075526 Incident and Hazard Management Procedure #1044716 Environmental Complaints Management Procedure

Type	Document number and title
	#1092028 MSQ First-strike Oil Response Plan #1257595 Flora and Fauna Management Guideline #1385321 Port of Gladstone, Long term maintenance dredging management plan LMDMP #1013458 Gladstone Maintenance Dredging Environmental Monitoring Procedure #1468341 Maintenance Dredging TACC Terms of Reference
Tier 4: Instruction/Form/ Template/Checklist	#1007885 Legal and Other Requirements Register #1292854 Conditions Register #764185 Risk Register #843113 Regulatory Training Matrix #1216609 Spill Management – Training #101314 Incident Management and Reporting #1316395 GPC's Risk Assessment for scheduling annual maintenance dredging at the PoG #1004505-ENV procedure Marine Fauna Incident Response Procedure for *TSHD Brisbane* #1781252 Port of Gladstone Maintenance Dredging Alternative Disposal Monitoring #1621179 GPC Corporate Glossary Instruction
Other	#1840284 PoG Maintenance Dredging EA EPPR00570813 #1928497 ENV SD 2023-4051 - Gladstone Port 10 Year Maintenance Dredging Permit 2023 #1840277 DA 2206-29253 SDA In-Channel placement #1840281 PSD DA PoG In-Channel MRA 2206-29253 SDA Attachment 6 Nov 2022 #1840282 PSD DA PoG In Channel MRA 2206-29253 SDA Attachment 7 Nov 2022#1846570 BMT (2022) Implementation Report - Sediment Sampling and Analysis Plan for the Port of Gladstone Maintenance Dredging 2022.

7.2 Appendix 2 – Approvals

Permit

Environmental Protection Act 1994

Environmental authority EPPR00570813

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Environmental authority number: EPPR00570813

Environmental authority takes effect on the date that your related development approval takes effect (TA 2206-29253 SDA). This is the take effect date.

The anniversary date of this environmental authority is the same day each year as the take effect date. The payment of the annual fee will be due each year on this day.

Environmental authority holder(s)

Name(s)	Registered address
GLADSTONE PORTS CORPORATION LIMITED	Kullaroo House 40 Goondoon Street GLADSTONE DC QLD 4680

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Prescribed ERA, ERA 16 - Extraction and Screening, 1: Dredging, in a year, the following quantity of material, (c) more than 100,000t but not more than 1,000,000t	Adjacent to LOT 63/CTN1787
Prescribed ERA, ERA 16 - Extraction and Screening, 1: Dredging, in a year, the following quantity of material, (c) more than 100,000t but not more than 1,000,000t	Adjacent to Lot 98/CTN279
Prescribed ERA, ERA 16 - Extraction and Screening, 1: Dredging, in a year, the following quantity of material, (c) more than 100,000t but not more than 1,000,000t	Lot 210/SP120888

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Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3 of the EP Act) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days);

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or

b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or

c) otherwise-on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the

additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.

Amanda Gray
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Date issued: 02 November 2022

Amanda Gray

Enquiries:
Coastal and Marine Assessment
Department of Environment and Science

Phone: 1300 130 372
Email: palm@des.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site.

Development Approval

This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of Environment and Science to ensure that you have the most current version of the environmental authority relating to this site.

Conditions of environmental authority

Environmentally relevant activities and location details

Environmentally relevant activity/activities	Location(s)
Prescribed ERA, ERA 16 - Extraction and Screening, 1: Dredging, in a year, the following quantity of material, (c) more than 100,000t but not more than 1,000,000t	Adjacent to LOT 63/CTN1787
Prescribed ERA, ERA 16 - Extraction and Screening, 1: Dredging, in a year, the following quantity of material, (c) more than 100,000t but not more than 1,000,000t	Adjacent to Lot 98/CTN279
Prescribed ERA, ERA 16 - Extraction and Screening, 1: Dredging, in a year, the following quantity of material, (c) more than 100,000t but not more than 1,000,000t	Lot 210/SP120888

The environmentally relevant activity conducted at the locations as described above must be conducted in accordance with the following site-specific conditions of the approval.

Agency interest: General	
Condition number	**Condition**
GPMG1	Activities under this environmental authority must be conducted in accordance with the following limitations: (a) the amount of dredged material in a year must not exceed 1,000,000t; and (b) within the bounds of the Port of Gladstone **maintenance dredging** footprint as shown in Schedule 2 on the following approved plans— (i). Figure 1 – Limits of Gladstone Port, showing existing approved channels, berth pockets, swing basins, anchorages and marina (ii). Figure 2 – Boyne River Bar Maintenance Dredging Section 86 Approval Details, drawing no. 702-00573, dated 6 November 2017
GPMG2	In relation to environmental performance, **dredging** equipment must be in survey, registered and equal to or better than the following:

	(a) Trailing Suction Hopper Dredge (TSHD) equipped with: (i). below keel discharge of tail **waters** via an anti-turbidity control valve; (ii). on-board systems for determining solids/water ratio or density of dredged material; (iii). electronic positioning and depth control system for defining the location and depth of **dredging**; (iv). dredge heads fitted with fauna exclusion devices (e.g. turtle deflectors); and (v). valves to control the amount of air in the overflow water, reducing turbidity. (b) Cutter Suction Dredge equipped with: (i). electronic positioning and depth control system for defining the location and depth of **dredging**; (ii). continuous delivery connection to an approved placement site; (iii). a system or process to ensure the delivery system integrity is maintained at all times; and (iv). on-board systems for determining solids to water ratio or density of dredged material during operations. (c) Grab Dredge equipped with electronic positioning system for defining the location and depth of **dredging**.
GPMG3	All reasonable and practicable **measures** must be taken to minimise the likelihood of **environmental harm** being caused.
GPMG4	Record the area(s) dredged in relation to the approved plan(s) in Schedule 2, the volume of material removed (to the nearest tonne) and where these volumes are placed.
GPMG5	All information and records required by this permit must be kept for five (5) years and be made available to the **administering authority** upon request.
GPMG6	The **administering authority** must be advised at least five (5) business days prior to the commencement of any **dredging activity**, including information on the area to be dredged and the location(s) of disposal with evidence of any applicable approvals for disposal. For placement of dredge material on land (other than for beach nourishment) include evidence that the containment area is certified as fit for purpose by a registered Professional Engineer of Queensland (RPEQ).
GPMG7	A suitably **qualified person** must design and/or conduct a receiving environment monitoring program to monitor the effects of **maintenance dredging** on the marine environment.
GPMG8	The receiving environment monitoring program must include at least the following aspects: (a) significant and **sensitive receptors** in the **port area** are identified and mapped; (b) environmental aspects and potential impacts are identified; (c) all contaminant releases are monitored; (d) the methods for collection and analysis of the samples (including specific areas to be monitored, when monitoring is to be undertaken and duration of monitoring);

	(e) the methods of analysing the data and responding to the results to ensure compliance with conditions; (f) long-term ecological impacts associated with **dredging** operations are monitored; (g) reporting intervals; and (h) review of environmental performance is undertaken after each **dredging** campaign.
GPMG9	A copy of the receiving environment monitoring program must be submitted to the **administering authority** at least 20 business days prior to the commencement of **dredging** and, if necessary, amended in accordance with any comments made by the **administering authority**.

Agency interest: Air

Condition number	Condition
GPMA1	The release of odour and/or airborne contaminants from the **activity** must not cause **environmental nuisance** at any **nuisance sensitive place**.

Agency interest: Land

Condition number	Condition
PML003	Treatment and management of acid sulfate soils must comply with the latest edition of the Queensland Acid Sulfate Soil Technical Manual.

Agency interest: Acoustic

Condition number	Condition
GPMN1	Noise from the **activity** must not cause **environmental nuisance** at any **nuisance sensitive place**.

Agency interest: Water	
Condition number	**Condition**
GPMWT1	Monitor and keep records of the quality characteristics of the release of **decant waters** to check compliance with Condition GPMWT2 at a frequency not less than that specified in Schedule 1, Table 1 – Dredge Decant Water Release Limits.
GPMWT2	Dredge **decant waters** must only be released to **waters** in compliance with the release limits listed in Schedule 1, Table 1 – Dredge Decant Water Release Limits at the following discharge locations: RG Tanna (RGT) from the reclamation cells to Port Curtis via Ken's Drain: 23° 49.97' S, 151° 14.10' E and 23° 49.91' S, 151° 14.07' E Wiggins Island Coal Export Terminal (WICET) to Calliope River Anabranch: 23° 50.23' S, 151° 11.81' E (Reclamation Area B) and 23° 50.88' S, 151° 10.82' E (Reclamation Area C) Fisherman's Landing to Port Curtis: 23° 47.39' S, 151° 09.57' E Western Basin Reclamation Area (WBRA) to Port Curtis: 23° 45.85' S, 151° 9.88' E
GPMWT3	All determinations of the quality of contaminants released to **waters** must be made in accordance with, but are not limited to, methods prescribed in the latest edition of the **administering authority's** Monitoring and Sampling Manual; and carried out on samples that are representative of the discharge.
GPMWT4	A suitably **qualified person(s)** must conduct any monitoring required by this approval.
GPMWT5	All analyses and tests required under this authority must be carried out at a laboratory that has NATA certification for such analyses and tests. The only exception to this condition is for in-situ monitoring of pH, Dissolved Oxygen and Turbidity.
GPMWT6	Immediately cease discharging **decant waters** if any water quality parameter stated in Schedule 1, Table 1 – Dredge Decant Water Release Limits is exceeded and take reasonable and practical **measures** to rectify the exceedance.

Agency interest: Reporting	
Condition number	**Condition**
GPMR1	A report is to be submitted to the **administering authority** within 40 business days of completion of all monitoring required by this authority. The report must include areas and volumes that were dredged, where it was placed, reportable incidents and all monitoring results with summaries, graphic interpretations and an assessment of these results in relation to the conditions of this authority and environmental impacts. In respect of the receiving environment monitoring program, reports are to be provided as detailed in that plan.
GPMR2	Any incident of **environmental harm** (including a reasonable suspicion that **environmental harm** has or is likely to have occurred), the activities must cease immediately and be reported to the **administering authority** as soon as practicable, but within 24 hours on (07) 4971 6500 (during business hours) or 1300 130 372 (Pollution Hotline).
GPMR3	A written notice detailing the following information must be provided to the **administering authority** within 14 days of any incident provided in accordance with Condition GPMR2: (a) the name of the operator, including their approval number; (b) the name and telephone number of a designated contact person; (c) quantity and substance released; (d) vehicle and registration details; (e) the location and time of the release; (f) the suspected cause of the release; (g) a description of the effects of the release; (h) the results of any sampling performed in relation to the release; (i) actions taken to mitigate any **environmental harm** caused by the release; and (j) proposed actions to prevent a recurrence of the release.
GPMR4	All complaints received must be recorded and the following details provided to the **administering authority** upon request: (a) time, date, name and contact details of the complainant; (b) reasons for the complaint; (c) details of investigations undertaken by the **port authority**; (d) conclusions formed; and (e) actions taken to resolve the complaint.

Agency interest: Waste	
Condition number	**Condition**
GPMWS1	Only remove waste from the site by using a transporter lawfully able to transport it and to a place lawfully able to receive it.
GPMWS2	Waste must not be burnt.

Agency interest: Legislative Requirements	
Condition number	**Condition**
PLR022	This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state controlled roads), the Department of Natural Resources and Mines (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).
PLR024	Development Approval This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of Environment and Heritage Protection to ensure that you have the most current version of the environmental authority relating to this site.

Agency interest: In-stream Dredge Material Placement	
Condition number	**Condition**
ISP01	**In-channel dredge material placement** must only occur within the bounds denoted within the following plans: - **Tide Island In-Channel MRA** prepared by **BMT** dated **24 September 2021**, Drawing Number **A-1**, revision **A**. - **Clinton In-Channel MRA** prepared by **BMT** dated **24 September 2021**, Drawing Number **A-2**, revision **B**.
ISP02	Prior to the commencement of each campaign of **in-channel dredge material placement**, except in the first instance of placement, an Operational Plan must be developed and submitted to the **administering authority** at either of the addresses below: palm@des.qld.gov.au; or Department of Environment and Science Permit and License Management Implementation and Support Unit GPO Box 2454 Brisbane Qld 4001

ISP03	The Operational Plan, as required by condition ISP02, must include: 1. Volume of material to be deposited in tonnes. 2. A copy of the land-use approval for the deposition of the dredge material at the **in-channel dredge material placement** sites. 3. Details of the material placement: a) type of equipment to be used in placement of **dredge material**; b) methods to be utilised for transporting **dredged material**; and c) method for deposition of **dredge material**. 4. Except the first instance of placement, a review of previous monitoring data and impacts to **sensitive receptors** carried out by a suitably **qualified person**. 5. Monitoring plan prepared by a suitably **qualified person** to monitor the impacts to **sensitive receptors** from the placement and material which has moved from the placement site. The monitoring plan must: a) identify and map significant and **sensitive receptors** in the port area; b) identify **environmental values** and potential impacts; c) monitor all releases; d) detail the methodology to be used for the collection and analysis of samples (including specific areas to be monitored, when monitoring is to be undertaken and duration of monitoring); e) detail the methodology for analysing the data and responding to the results to ensure compliance with conditions; f) monitor long-term ecological impacts associated with dredging operations area; and g) identify reporting intervals. 6. Statement from a suitably **qualified person** demonstrating the continued placement of material at the **in-channel dredge material placement** sites will not cause **environmental harm**.
ISP04	The Operational Plan, as required by condition ISP02, must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this authority.
ISP05	The Operational Plan, as required by condition ISP02, must be submitted to the **administering authority** at least 20 business days prior to the commencement of **in-channel dredge material placement** and amended in accordance with any comments made by the **administering authority**.
ISP06	If the Operational Plan, is amended, it must be provided to the **administering authority** at least 20 business days prior to commencing activities under the amended Operational Plan.
ISP07	Any comments made by the administering authority on the amended Operational Plan provided in accordance with condition ISP05 must be addressed to the satisfaction of the **administering authority** prior to implementing the amended Operational Plan.
ISP08	Condition ISP05 and ISP06 applies each time the Operational Plan is amended.
ISP09	The **in-channel dredge material placement** must be undertaken in accordance with the Operational Plan required in condition ISP02.

Definitions

Key terms and/or phrases used in this document are defined in this section and **bolded** throughout this document. Applicants should note that where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

Activity means the environmentally relevant activity to which this environmental authority relates.

Administering authority means the Department of Environment and Heritage Protection and any successor administering the *Environmental Protection Act 1994*.

Continuously, in respect of continuous monitoring means *in-situ* monitoring with data collected at least every five (5) minutes.

Control site refers to a monitoring site located beyond the anticipated **zone of influence** of sediment plumes and has **site pairing** with one or more **test sites** or **sentinel sites**. In monitoring programs, **control sites** serve the same role as do **reference sites** but only for a defined subset of parameters.

Decant waters means settled dredge spoil waters released to Port Curtis following settlement or other management requirements.

Dredging includes extraction of mud, sand, coral, ballast, shingle, gravel, clay, earth and other material from the bed of Queensland tidal and non-tidal waters. Dredging also includes the discharge of dredge decant waters and is not complete until decanting has finished to the satisfaction of the administering authority.

Environmental harm means environmental harm as defined in section 14 of the *Environmental Protection Act 1994*.

Environmental nuisance is unreasonable interference or likely interference with an environmental value caused by—

(a) aerosols, fumes, light, noise, odour, particles or smoke; or

(b) an unhealthy, offensive or unsightly condition because of contamination; or

(c) another way prescribed by regulation.

Environmental value means environmental value as defined in section 9 of the *Environmental Protection Act 1994*.

In-channel dredge material placement means the placement of material within the bounds of the dredge material placement sites denoted within Schedule 3.

Maintenance dredging means dredging undertaken in existing approved shipping channels, berth pockets, swing basins, anchorages and marina(s) to maintain declared depths.

Measures has the broadest interpretation and includes plant, equipment, physical objects, monitoring procedures, actions, directions and competency.

NTU means nephelometric turbidity units.

Nuisance sensitive place means;

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises;
- a motel, hotel or hostel;
- a kindergarten, school, university or other educational institution;

- a medical centre or hospital;
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area;
- a public thoroughfare, park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

Port area means as defined in section 267 of the *Transport Infrastructure Act 1994*.

Port authority means as defined in Schedule 2 of the *Transport Infrastructure (Ports) Regulation 2005*.

Qualified person means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

Reference site refers to a monitoring site located not only beyond the anticipated **zone of influence** of a sediment plume, but also beyond other sources of environmental impacts, and has **site pairing** with one or more **test sites** or **sentinel sites**. In monitoring programs, **reference sites** serve the same role as do **control sites** but can generally be suitable for a broader set of parameters.

Sediment plume-associated impacts are impacts associated with sediment plumes including turbidity and suspended solids concentrations, light attenuation or sedimentation rates elevated above either **control site** or **reference site** readings or baseline conditions for an equivalent time of year. Where **dredge material** possesses acid sulfate soil-related properties, **sediment plume-associated impacts** may also include pH, dissolved oxygen and metal and metalloid-related toxicity impacts.

Serious environmental harm means serious environmental harm as defined in section 17 of the *Environmental Protection Act 1994*.

Sensitive receptor includes biological **sensitive receptors** together with other **environmental values** sensitive to the effects of dredge-generated **sediment plume-associated impacts**.

Sentinel site is a **test site** that is situated between the disturbance source and the **sensitive receptor** and serves to provide earlier warning of developing adverse conditions than does a **test site**

Test site is a **concern site** that functions as a test point for compliance, is a monitoring site situated within the area where a **sensitive receptor** occurs and where environmental monitoring-related assessment criteria (e.g. **trigger values**) apply.

Western Basin means all existing shipping channels, berth pockets, swing basins and anchorages to the west of the Wiggins Island wharf swing basin.

Waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and any under groundwater, any part-thereof.

END OF PERMIT

Appendices

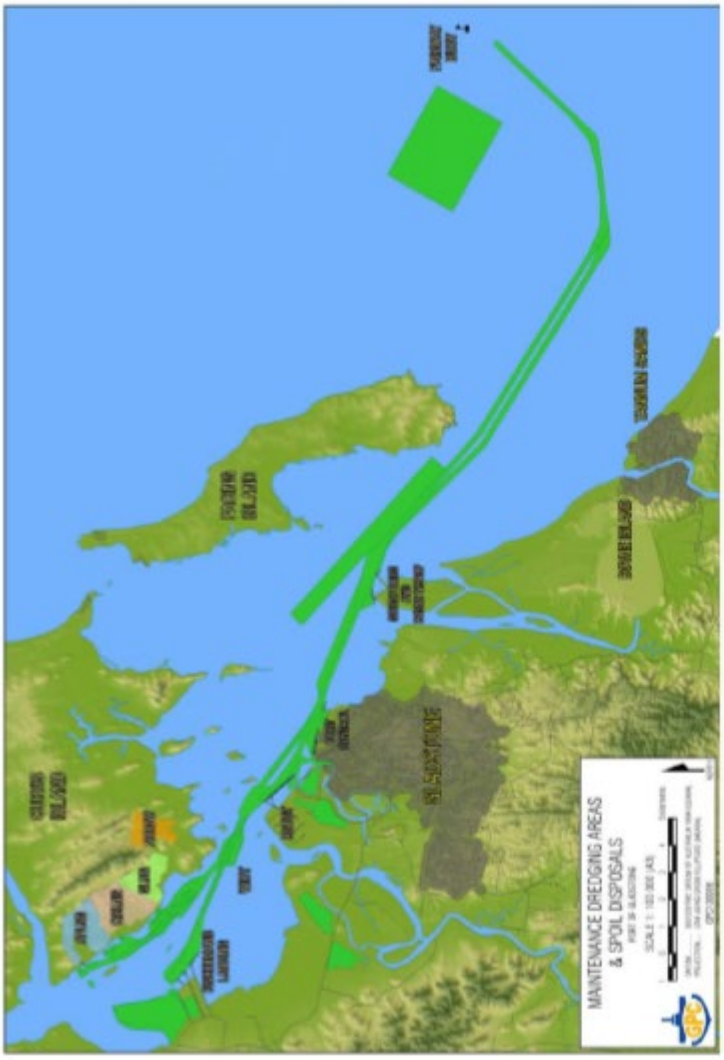
Schedule 1

GPMT1	Table 1 – Dredge Decant Water Release Limits			
Quality Characteristics	Type of Release Limit			Monitoring Frequency
	Minimum	80th Percentile	Maximum	
Suspended Solids	-	80 mg/L (Senescent[1]) 50 mg/L (Growing[1])	100 mg/L (Senescent[1]) 60 mg/L (Growing[1])	Weekly
Turbidity	-			Continuously
Dissolved Oxygen	2.0 mg/L			Continuously
pH	6.5	-	9.0	Continuously
Ammonia			1 mg/L	Weekly
Aluminium			165.0[3] µg /L	
Cadmium (filtered)	-	-	2.1[3] µg/L	Weekly[2]
Chromium (filtered)	-	-	13.2[3] µg/L	Weekly[2]
Copper (filtered)	-	-	3.9[3] µg/L	Weekly[2]
Lead (filtered)	-	-	13.2[3] µg/L	Weekly[2]
Mercury (filtered)	-	-	0.3[3] µg/L	Weekly[2]
Nickel (filtered)	-	-	21.0[3] µg/L	Weekly[2]
Silver (filtered)	-	-	4.2[3] µg/L	Weekly[2]
Zinc (filtered)	-	-	45.0[3] µg/L	Weekly[2]
Tributyltin (TBT)			-	Weekly[2]

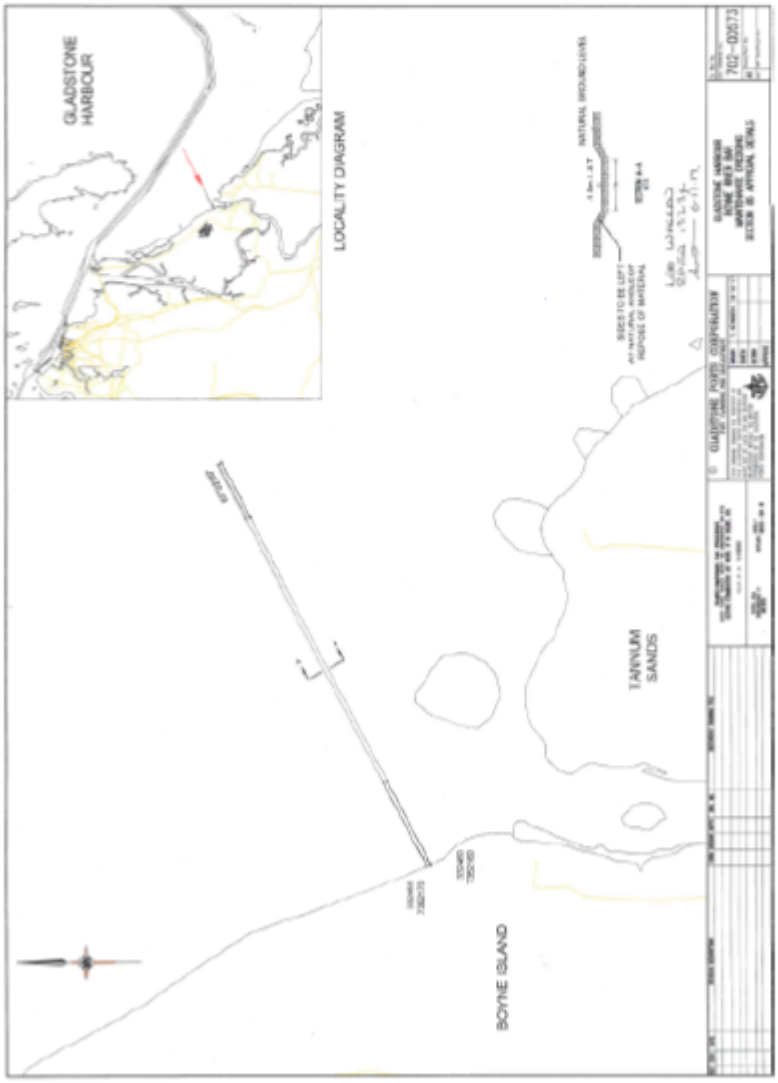
[1] In consideration of seagrass requirements, "Senescent" season is from 1 January to 30 June inclusive. The remainder of the year is taken to be the "Growing" season.
[2] While pH levels are outside the above range, monitoring for the above metal species is to be carried out daily.
[3] These values are trigger values only. If three (3) consecutive results exceed these values, all results must be reported to the administering authority and further investigation may be required.

Schedule 2

GPMF1	Figure 1 – Limits of Gladstone Port, showing existing approved channels, berth pockets, swing basins, anchorages and marina

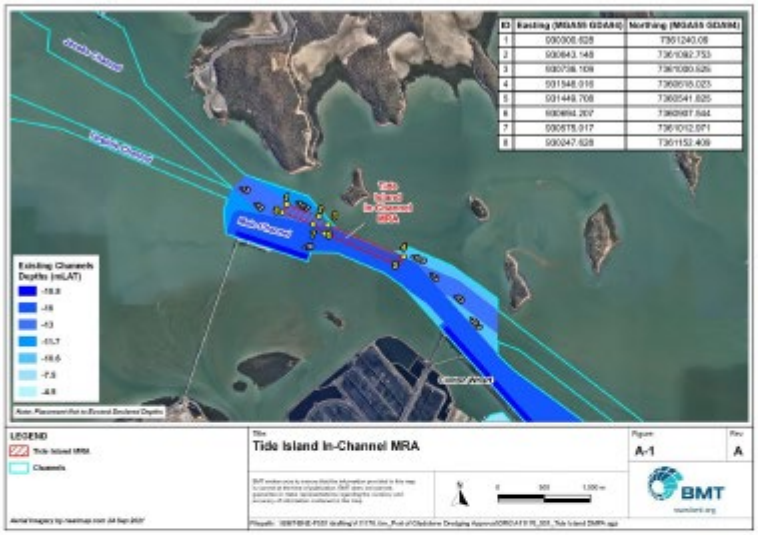


GPMF2	Figure 2 – Boyne River Bar Maintenance Dredging Section 86 Approval Details, drawing no. 702-00573, dated 6 November 2017



Schedule 3

Tide Island In-Channel MRA prepared by BMT dated 24 September 2021, Drawing Number A-1, revision A.



Clinton In-Channel MRA prepared by BMT dated 24 September 2021, Drawing Number A-2, revision B.

ENVIRONMENT PROTECTION (SEA DUMPING) ACT 1981

SEA DUMPING PERMIT No. SD2023/4051

for

Gladstone Ports Corporation Limited
(ACN: 131 965 896)

I, HEATHER AGNEW, a delegate of the Minister for the Environment and Water, acting under Sections 19 and 21 of the *Environment Protection (Sea Dumping) Act 1981*, hereby grant a 10-year sea dumping permit to Gladstone Ports Corporation Limited, 40 Goondoon Street, Gladstone, Queensland 4680 (ACN: 131 965 896), to load for the purposes of dumping, and to dump, up to 2,920,000 cubic metres (*in-situ*) of dredged material, derived from maintenance dredging at the Port of Gladstone, Queensland.

This permit is valid from 1 January 2024 until 1 January 2034, subject to conditions specified in Appendices 1 and 2.

DATE.....21st .....day of.....December.....2023

HEATHER AGNEW
Delegate of the Minister

This permit comprises ten (10) pages, including Appendices 1 - 3.

Appendix 1

CONDITIONS FOR THE LOADING, AND DUMPING AT SEA OF MAINTENANCE DREDGED MATERIAL DERIVED FROM THE PORT OF GLADSTONE

DEFINITIONS
In this permit:

Act	means the *Environment Protection (Sea Dumping) Act 1981*.
Application	means the application for a permit under the **Act** submitted by the **permit holder** and received by the **department** on 15 May 2023, with further information received on 17 July 2023; 22, 25 and 29 September 2023; 4, 5 and 6 October 2023; 30 November 2023; and 1 December 2023.
Department	means the Australian Government department responsible for administering the **Act**. For the purposes of this permit, any communication to the department should be sent by email addressed to: seadumping@dcceew.gov.au.
Disposal site	means the disposal area (site code: **AU0027** bound by the following co-ordinates (WGS84), and as shown in **Figure 1** (at Appendix 2).

Latitude	Longitude
-23.8587	151.4652
-23.8804	151.4515
-23.8755	151.4974
-23.8972	151.4837

Dumping activities	means all activities associated with the dumping permitted under this permit, including: (i) the loading for the purpose of dumping of dredged material (ii) the dumping of the material at the prescribed **disposal site**.
Environmental incident	means any event that has the potential to, or does, **impact** on the environment other than the **dumping activities** for which this **permit** is granted.
Environmental risk	means any risk that has the potential to **impact** on the environment, other than the **dumping activities** for which this **permit** is granted.
EPBC Act	means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).
GPS	means Global Positioning System.
Impact	(verb) means to cause any measurable direct or indirect disturbance or harmful change as a result of any activity associated with **dumping activities**.

	(noun) means any measurable direct or indirect disturbance or harmful change as a result of any activity associated with **dumping activities**.
Marine species	means all marine cetaceans, pinnipeds, sirenians, elasmobranchs and reptiles.
Marine species observer	means a person who has demonstrated experience in **marine species** observation and recognition, distance estimation and reporting, can give reliable independent advice on **marine species** presence, identity, and distance from the observer and, while in the role of **marine species** observer, has no duties other than making and recording visual observations for **marine species**.
Minister	means the Australian Government Minister administering the **Act** and includes a Delegate of the Minister.
Monitoring and management plan	means the suite of documents consisting of: (i) Long-term Maintenance Dredging Management Plan for the Port of Gladstone, version 8b, dated 28 November 2023 and approved by the **minister** from the date of signature of this permit. (ii) Port of Gladstone Maintenance Dredging Environmental Management Plan, version 21, dated 24 November 2023 and approved by the **minister** from the date of signature of this permit. (iii) Environmental Monitoring Procedure, version 25a, dated 24 November 2023 and approved by the **minister** from the date of signature of this permit.
Monitoring zone	means the area within a 300-metre radius of the **vessel**.
Mounding	means the accumulation of dredge material from **dumping activities** creating a high point from the sea floor within the **disposal site**.
Permit holder	Means Gladstone Ports Corporation Limited, 40 Goondoon Street, Gladstone, Queensland 4680 (ACN: 131 965 896)
Suitably qualified	means a person who has/holds one or a combination of the following: professional qualifications, training (e.g., identification at sea of **marine species**), skills and/or experience related to the nominated subject matter and can give authoritative independent assessment, advice, and analysis on performance relative to the subject matter using the relevant protocols, standards, methods and/or literature.
Vessel(s)	means any vessel or vessels used for or in connection with **dumping activities**.
Website	means a set of related web pages located under a single domain name attributed to the **permit holder** and available to the public.

Except so far as the contrary intention appears, terms used in the conditions of this permit have the same meaning as such terms in the **Act**.

CONDITIONS

1. The **permit holder** must ensure that all persons engaged in the **dumping activities** under this permit, including any owner and any person in charge of a **vessel**, comply with this permit and the requirements of the **Act**. The fulfilment of these conditions is, at all times while this permit is valid, the responsibility of the **permit holder.**

Material to be dumped

2. The **permit holder** must ensure that no more than 2,920,000 cubic metres (*in-situ*) of material derived from maintenance dredging of the Port of Gladstone is loaded and dumped, in accordance with methods specified in the **application**.

Disposal site

3. The **permit holder** must only dump within the **disposal site** shown in *Figure 1* at Appendix 2.
4. The **permit holder** must establish by **GPS** that, prior to dumping, the **vessel** is within the **disposal site**.
5. The **permit holder** must ensure that the dredged material is dumped across the **disposal site** in a manner to prevent **mounding**.

Monitoring and management plan

6. The **permit holder** must commence implementing the approved **monitoring and management plan** upon the commencement of **dumping activities** and notify the **department** within 5 days of the date on which **dumping activities** have concluded.
7. If the **minister** requires for the better protection of the environment, the **permit holder** to make specified revisions to the **monitoring and management plan**, the **permit holder** must submit a revised monitoring and management plan in accordance with the specified revisions for the **minister's** approval. If the **minister** approves a revised monitoring and management plan pursuant to this condition, the **permit holder** must implement the version of the **monitoring and management plan** most recently approved by the **minister** in writing from the date of its approval.
8. The **permit holder** may submit for the **minister's** approval a revised version of the **monitoring and management plan**. If the **minister** approves in writing a revised monitoring and management plan pursuant to this condition, the **permit holder** must implement the version of the **monitoring and management plan** most recently approved by the **minister** in writing, from the date of its approval.
9. The **permit holder** may make administrative changes to the **monitoring and management plan** without submitting it for the approval of the **minister**, if the taking of the action in accordance with the revised **monitoring and management plan** will not have a new or increased **impact** on the environment or reduce the public accessibility of information. If the **permit holder** makes this choice, they must:
    a. notify the **department** in writing that the **monitoring and management plan** has been revised and provide the **department** with an electronic copy of the revised plan showing the proposed changes in track mode, accompanied by a covering letter specifying the changes made and the reasons that the **permit holder** considers that taking the action in accordance with the revised plan would not be likely to have a new or increased **impact** on the environment and/or reduce the public accessibility of information

b. implement the revised **monitoring and management plan** no sooner than 14 days after the date of submission of the revised **monitoring and management plan** to the **department** unless the **department** informs the **permit holder** in writing that the revised **monitoring and management plan** requires submission under condition 8

c. for the life of this permit, maintain a record of the reasons the **permit holder** considers that taking the action in accordance with the revised **monitoring and management plan** would not have a new or increased **impact** on the environment and/or reduce the public accessibility of information.

10. Each version of the **monitoring and management plan** approved or adopted for implementation must be published on the **website** within 30 days of its approval or adoption for implementation, and must include:

    a. the date of this permit

    b. the date that a revised version of the **monitoring and management plan** is approved by the **minister**

    c. the date that a revised version of the **monitoring and management plan** may be implemented without the **minister's** approval in accordance with condition 9.

    The **permit holder** must ensure that each version of the **monitoring and management plan** remains published on the **website** until the expiry of the permit.

Protection of marine species

11. The **permit holder** must ensure that at least one **suitably qualified marine species observer** is on duty on at least one **vessel** adjacent to or in the **monitoring zone** at least 30 minutes prior to, and throughout, any **dumping activities**. The **permit holder** must ensure that the **marine species observer** scans the entire **monitoring zone**, using binoculars from a suitable observation position on the **vessel**, for the presence of any **marine species** within the **monitoring zone** at least once every 30 minutes, commencing at least 30 minutes prior to, and continuing throughout, any **dumping activities.**

12. If any **marine species** is/are sighted in the **monitoring zone**, the **permit holder** must not commence **dumping activities**, or if **dumping activities** has already commenced, must pause **dumping activities** as soon as safe and practicable to do so, until either:

    a. 30 minutes after the time when the last **marine species** has left the **monitoring zone** of its own accord

    b. the **vessel** has moved to another area of the **disposal site** where no **marine species** are within the **monitoring zone** of the **vessel's** new location.

    Note: It is an offence under the **EPBC Act** to interfere with a **marine species** or in any way attempt to deter it from entering the **monitoring zone** or cause it to leave.

Environmental risk and incidents

13. If, at any time during **dumping activities**, an **environmental incident** occurs or an **environmental risk** is identified, all reasonable measures must be taken immediately by the **permit holder** to minimise or mitigate the **environmental risk** and/or the **impact** of the **environmental incident**. The **permit holder** must provide a report on the **environmental incident** and/or **environmental risk** to the **department** within 72 hours of detecting any **environmental incident** and/or **environmental risk** and include in the report:

    a. details of the **environmental incident** and/or **environmental risk**, including the date, time, and location (GPS co-ordinates)

b. the measures taken to minimise or mitigate the **environmental risk** and/or the **impact** of the **environmental incident** following detection

c. the success of those measures in addressing the **environmental incident** and/or **environmental risk**

d. any additional measures proposed to be taken.

14. The **permit holder** must document any detected injury to, or death of any **marine species** potentially associated with the operation of a **vessel** or **dumping activities**. The date, time, location (**GPS** co-ordinates) and nature of each detected injury to, or death of, the **marine species** and the species involved, if known, must be recorded, and reported to the **department** within 72 hours of detecting the injury to, or death of, the **marine species**.

Access for observers

15. If requested by the **department**, the **permit holder** must provide access, including to **vessels**, for at least 2 nominees of the **department** to witness, inspect, examine and/or audit any part of the operations, including any **dumping activities**, monitoring activities, equipment, and any records. The **permit holder** must provide all reasonable assistance to nominees of the **department** in carrying out their duties.

Record-keeping and reporting

16. The **permit holder** must make and retain records (which may comprise weekly plotting sheets or an extract of the ship's log certified by the **vessel's** captain) which must detail:

    a. the dates, times, and **GPS** co-ordinates of **vessel** movements for **dumping activities**

    b. the volume of dredged material (in-situ cubic metres) dumped and quantity in dry tonnes for the specified operational period, including the proportion that this amount represents of the total amount permitted under the permit for the dredging campaign

    c. the names and relevant training and experience of the person(s) who undertook the **marine species** observation required under condition 11, the **marine species** observed within the **monitoring zone** for each **vessel** movement, including, for each sighting, the date, time, species (or nearest identification), location (**GPS** co-ordinates) and approximate distance of the **marine species** from the **vessel**, and the action taken to comply with condition 12.

17. The **permit holder** must retain the records required by conditions 13, 14 and 16 for the life of the permit, for verification and audit purposes.

18. The **permit holder** must ensure that a **suitably qualified** person undertakes a bathymetric survey of the **disposal site**:

    a. prior to the commencement of **dumping activities** authorised under this permit

    b. within one month of the completion of all **dumping activities** authorised under this permit.

19. Within 2 months of the final bathymetric survey being undertaken, the **permit holder** must provide a digital copy of each of the bathymetric surveys to the Australian Hydrographic Office, Locked Bag 8801, Wollongong, NSW 2500 or via email at: datacentre@hydro.gov.au.

20. The **permit holder** must provide a report on the bathymetry to the **department** within 2 months of the final bathymetric survey being undertaken. The report must include a chart showing the change in sea floor bathymetry as a result of **dumping activities** and include a reliable estimate of the volumes of dumped material that appear to have been retained within the **disposal site**.

21. To facilitate annual reporting to the International Maritime Organization, the **permit holder** must report to the **department** by 31 January each year, including a final annual report on the day of the expiry of this permit or completion of all **dumping activities** under this permit, the information specified at Appendix 3 to this permit, in the format of Appendix 3 or as otherwise approved by the **department.**

Auditing

22. If the **department** believes that it is necessary or desirable to undertake an audit of the permit conditions, the **permit holder** must comply with any such request and must provide any necessary assistance to the **department**'s representatives in carrying out their duties.

Appendix 2

Figure 1: The disposal site and dredge footprint, Port of Gladstone, Queensland.

Appendix 3

SEA DUMPING PERMIT ANNUAL INTERNATIONAL REPORTING REQUIREMENTS

Please fill in this form and return it by **email** to the **department** by 31 January each year. This information is required for Australia's reporting obligations to the International Maritime Organization under the London Protocol.

Email: seadumping@dcceew.gov.au and epbcmonitoring@dcceew.gov.au, quoting the permit reference number (**SD2023-4051**).

Permit details

Sea Dumping Permit number:	**SD2023-4051**
Permit holder:	**Gladstone Ports Corporation Limited**
Address:	**40 Goondoon Street, Gladstone, Queensland 4680**
Permit start date:	**01/01/2024**
Permit end date:	**01/01/2034**
Description of material:	**Maintenance dredged**
Total permit quantity (cubic metres):	**2,920,000 m³**

Annual report

Submitted by (name):	
Phone:	
Email:	Date: *(DD/MM/YYYY)*

1) Specify the calendar year this report applies to: _____ *(Reporting period)*

2) Quantity of material permitted under this permit but not yet dumped at the beginning of the reporting period:

_____m³

3) Quantity of material dumped during the reporting period (*please provide volume and weight*) at each **disposal site**:

Geodetic Datum:

Disposal Site Code	**Disposal Site Latitude** *(North/South decimal degrees)*	**Disposal Site Longitude** *(East/West decimal degrees)*	**Volume** *(in-situ cubic metres)*	**Weight** *(dry weight tonnes)*
AU0027	-23.8973°	151.4837°		
	-23.8805°	151.4517°		
	-23.8588°	151.4652°		
	-23.8757°	151.4973°		

Briefly describe any conversion rates used for calculating disposal volumes:

_____

4) Quantity of material permitted under this permit but not yet dumped at the end of the reporting period: _____m^3

5) Was field monitoring of the **disposal sites** conducted during the reporting period? Yes ☐ No ☐

If yes, please complete questions 6-9 below.

Monitoring of the disposal site

6) When was field monitoring conducted? *(Please tick all boxes which apply.)*

Before dumping ☐, During dumping ☐, After dumping ☐, Other ☐

*If other, please explain:*_____

7) What type(s) of field monitoring was undertaken? *(Please tick all boxes which apply.)*

Biological ☐, Geological ☐, Chemical ☐, Physical ☐, Other ☐

*If other, please explain:*_____

8) Were any adverse impact(s) found beyond those that were predicted? Yes ☐, No ☐

*If yes, briefly describe the impacts (e.g., physical, chemical, or biological) and their spatial or temporal variation:*_____

9) Provide a website link/URL to Field Monitoring Reports, or any additional information:

_____

_____

SEA DUMPING PERMIT ANNUAL INTERNATIONAL REPORTING REQUIREMENTS

10

AM10-N

Queensland Government

SARA reference: 2206-29253 SDA
Applicant reference: A11176-InChannelDMPAs

7 November 2022

Gladstone Ports Corporation C/- BMT Commercial Australia Pty Ltd
PO Box 203
SPRING HILL QLD 4004
Jeremy.Visser@bmtglobal.com

Attention: Jeremy Visser

Dear Jeremy,

SARA Decision notice — Gladstone Harbour

(Assessment Manager decision notice given under section 63 of the *Planning Act 2016*)

The development application described below was confirmed as properly made by the State Assessment and Referral Agency (the department) on 21 June 2022.

Decision

Outcome:	Approved, subject to conditions
Date of decision:	7 November 2022
Conditions:	The approval is subject to the conditions in **Attachment 1**.
Advice:	Advice to the applicant is in **Attachment 2**.
Reasons:	The reasons for decisions are in **Attachment 3**.
Currency period:	This development approval will lapse if development is not started within the currency periods stated in section 85 of the *Planning Act 2016*

Development Details

Description:	Development permit	Operational work that is work within a coastal management district
SARA role:	Assessment manager	
SARA trigger:	8.4.3(l) (Planning Regulation 2017) – Operational work that is disposing of dredge spoil, or other solid waste material, in tidal water 10.17.3.2.1 (Planning Regulation 2017) – Operational work that is disposing of dredge spoil, or other solid waste material, in tidal water	
SARA reference:	2206-29253 SDA	
Real property description:	Lot 29 on DS391; Lot 210 on SP120888	

DA Advisory Team (DAAT)
Level 13, 1 William Street, Brisbane
PO Box 15009 CITY EAST QLD 4002

Local government area:	Gladstone Regional Council
Applicant name:	Gladstone Ports Corporation C/- BMT Commercial Australia Pty Ltd
Applicant contact details:	PO Box 203 Spring Hill QLD 4004 Jeremy.Visser@bmtglobal.com

Additional details

Native title considerations:	A native title assessment was completed as part of the assessment.
Level of assessment:	Code assessable

Dispute resolution

Representations:	The rights of applicants to make representations about this decision notice during the applicant's appeal period is set out in Chapter 3, Part 5 of the *Planning Act 2016*. Copies of the relevant provisions are in **Attachment 4**.
Appeal:	The rights of applicants to appeal to a tribunal or the Planning and Environment Court against decisions about a development application are set out in Chapter 6, Part 1 of the Planning Act. Copies of the relevant appeal provisions are in **Attachment 5**.

For further information please contact Dean Jones, Principal Planner, on 07 3244 9322 or via email DAAT@dsdilgp.qld.gov.au.

Yours sincerely,

Christopher Aston
State Planner

enc **Attachment 1** – Assessment manager conditions
Attachment 2 – Advice to the applicant
Attachment 3 – Reasons for the decision
Attachment 4 – Negotiated decision provisions
Attachment 5 – Appeal provisions
Attachment 6 – Approved plans and specifications
Attachment 7 – Gladstone Port Corporation referral agency response

cc Gladstone Regional Council, info@gladstone.qld.gov.au

Attachment 1—Assessment manager conditions

(Given under section 63(2)(e)(ii) of the *Planning Act 2016*)
(Copies of the plans and specifications referenced below are found at **Attachment 6**)

Schedule 8, Table 4, Item 3(l)—The chief executive administering the *Planning Act 2016* nominates the Director-General of the Department of Environment and Science to be the enforcement authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s):		
1.	The deposition of dredge material must be undertaken generally in accordance with the following plans: (a) Tide Island In-Channel MRA (a) Clinton In-Channel MRA.	For the duration of the works.
2.	Material must not be placed above -16mLAT for both the Tide Island In-Channel Material Relocation Area and Clinton In-Channel Material Relocation Area.	At all works.
3.	For the proposed works, only use clean materials and ensure that the works do not cause contamination.	For the duration of the works.
4.	(a) In the event that the works cause disturbance or oxidisation of acid sulfate soil, the affected soil must be treated and thereafter managed (until the affected soil has been neutralised or contained) in accordance with the current *Queensland Acid Sulfate Soil Technical Manual: Soil management guidelines*, prepared by the Department of Science, Information Technology, Innovation and the Arts, 2014. (b) Certification by an appropriately qualified person, confirming that the affected soil has been neutralised or contained, in accordance with (a) above is to be provided to palm@des.qld.gov.au or mailed to: Department of Environment and Science Permit and Licence Management Implementation and Support Unit GPO Box 2454 Brisbane Qld 4001	(a) Upon disturbance or oxidisation until the affected soil has been neutralised or contained. (b) At the time the soils have been neutralised or contained.
5.	(a) The volume of material disposed of in tidal water under this approval must not exceed 75,000m³ at the Tide Island Material Relocation Area and 150,000m³ at the Clinton In-Channel Material Relocation Area. (b) The total volume of material disposed of in tidal water under this approval, must be provided to palm@des.qld.gov.au or mailed to: Department of Environment and Science Permit and License Management Implementation and Support Unit GPO Box 2454	(a) In accordance with the requirements of the condition. (b) Within two (2) weeks of the completion of the works.

	Brisbane Qld 4001	
6.	(a) Prepare a hydrographic survey plan by a registered surveyor in accordance with *Standards for Hydrographic Surveys within Queensland Waters* to a Class B standard of spoil deposition area and the immediate adjacent area likely to be affected by the spoil disposal. (b) The hydrographic survey plan must be provided to palm@des.qld.gov.au or mailed to: Department of Environment and Science Permit and License Management Implementation and Support Unit GPO Box 2454 Brisbane Qld 4001	Within one (1) month of completion of the works.
Schedule 10, Part 17, Division 3, Table 2, Item 1—The chief executive administering the *Planning Act 2016* nominates the Director-General of the Department of Transport and Main Roads (Maritime Safety Queensland) to be the enforcement authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s):		
7.	(a) Provide written notice to the Regional Harbour Master (Gladstone) (gladstone.maritime@msq.qld.gov.au), when the development authorised under this approval is scheduled to commence. Each notice must state this application number, the location and name of registered place and the condition number under which the notice is being given. (b) Provide written notice to the Regional Harbour Master (gladstone.maritime@msq.qld.gov.au), when the development authorised under this approval has been completed. Each notice must state this application number, the location and name of registered place and the condition number under which the notice is being given.	(a) At least two (2) weeks prior to the commencement of works. (b) Within two (2) weeks of the completion of works.
8.	All vessels, structures, plant and equipment associated with the construction of the approved works must be lit/marked in accordance with the following specifications and requirements such that undertaking the construction works does not cause a risk to safe navigation of ships. (a) Gladstone Port Procedures, Standard for Commercial Marine Activities Gladstone Region, as well as appropriate legislative requirements for operational marine works being conducted by vessels in the Port of Gladstone. Lighting provided must not obscure, disguise or otherwise interfere with the effectiveness of navigational lighting.	While the works are occurring and to be maintained at all times.
9.	(a) The construction, operation or maintenance of the approved development must not damage or interfere (physically or by electrical or electro-magnetic emissions) with any aid to navigation.	(a) At all times. (b) As indicated.

	(b) In the event that damage or interference is caused to any aid to navigation, the Regional Harbour Master (Gladstone) must be immediately contacted on (07) 4971 5208 or gladstone.maritime@msq.qld.gov.au, and at the applicant's cost the damage or interference must be promptly repaired, replaced or interference removed.	
10.	(a) Prepare a Marine Execution Plan by an appropriately qualified person, that includes, but is not limited to the following: (i) demonstrating that all dredging operations will not impede the safe navigation of other vessels or restrict safe access to or from neighbouring structures. (ii) consistent with any requirements of Maritime Safety Queensland guidelines for major dredging operations. (iii) lighting / marking requirements as outlined in the Marine Execution Plan and any anchors deployed must be marked with yellow buoys and fitted with FL yellow lights. (b) Submit the Marine Execution Plan prepared in accordance with part (a) of this condition to the Regional Harbour Master (Gladstone) (gladstone.maritime@msq.qld.gov.au). (c) Undertake the placement of dredged material generally in accordance with the Marine Execution Plan.	(a) and (b) At least twenty (20) business days prior to the commencement of works. (c) For the duration of works.

2206-29253 SDA

Attachment 2—Advice to the applicant

General advice	
1.	Terms and phrases used in this document are defined in the *Planning Act 2016* its regulation or the State Development Assessment Provisions (SDAP) v3.0. If a word remains undefined it has its ordinary meaning.
2.	Gladstone Ports Corporation has issued a referral agency response (advice) imposing conditions contained in the letter dated 15 August 2022 in **Attachment 7**.

Attachment 3—Reasons for the decision

(Given under section 63(5) of the *Planning Act 2016*)

The reasons for the department's decision are:

- The operational work in tidal waters achieves compliance with the applicable Performance Outcomes (PO's) of SDAP State code 7 as the development will not impede the safe navigation of vessels or interfere with aids to navigation.
- The operational work in a coastal management district achieves compliance with the applicable PO's in SDAP State code 8 as the development:
  - is located to maintain coastal processes and conserve coastal resources.
  - does not impact on matters of State environmental significance.

Material used in the assessment of the application:

- The development application material and submitted plans
- *Planning Act 2016*
- Planning Regulation 2017
- the SDAP, Version 3.0
- the Development Assessment Rules
- SARA DA Mapping system.
- *Human Rights Act 2019.*

Attachment 4—Negotiated decision provisions

Attachment 5—Appeal provisions

Attachment 6—Approved plans and specifications

(given under section 43 (b) of the Planning Regulation 2017)

Attachment 6—Gladstone Port Corporation referral agency response

#1812766

15 August 2022

Gladstone Ports Corporation
c/- BMT Commercial Australia Pty Ltd, Jeremy Visser
Level 5, 348 Edward Street
BRISBANE QLD 4000

Dear Mr Visser

Referral Agency Response –with Conditions - RR2022/005/01

(given under s56 Planning Act 2016)

1 Application Details

The development application was properly referred to the Gladstone Ports Corporation Limited under section 54 of the *Planning Act 2016* on **8 July 2022**.

Application Number:	RR2022/005/01
Applicant Name:	Gladstone Ports Corporation Limited
Applicant Contact Details:	Jeremy Visser BMT Level 5, 348 Edward Street BRISBANE QLD 4000 Email: Jeremy.visser@bmtglobal.com
Approval Sought (Referral agency):	Prescribed assessable development within limits of a port
Location Street Address:	Leo Zussino Drive CALLEMONDAH QLD 4680
Land Owner:	Department of Resources
Location Real Property Description:	Unallocated state land adjacent to Lot 210 on SP120888
Local Government Area:	Gladstone
Present Zoning & Precinct	Within Port Limits – Port of Gladstone

2 Description Of Proposed Development

Prescribed assessable development within the limits of a port and on land below high water mark:

- Operational work that is work within a coastal management district for disposing of dredged material in tidal water

The prescribed development is to establish in-channel placement of maintenance dredging material at the Port of Gladstone. The two (2) in-channel placement sites are: Tide Island Dredge Material Placement Area (DMPA) and Marina DMPA. Both sites are within the port limits of the Port of Gladstone.

3 Referral Triggers

This development application was referred to the Gladstone Ports Corporation Limited under the following provisions of the *Planning Regulation 2017*:

Referral trigger: Schedule 10, Part 13, Division 3, Table 1 – Prescribed assessable development within limits of a port

4 Details Of Referral Response

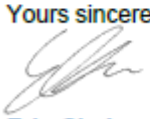
Referral agency powers: Referral agency powers are not limited in this response.

This development application has been assessed against port authority functions under the *Transport Infrastructure Act 1994*, chapter 8, part 3 as required in Schedule 10, Part 13, Division 3, Table 1, Item 4 of the *Planning Regulation 2017* and also matters referred to in section 22.

The Gladstone Ports Corporation Limited directs the assessment manager, under section 56(1)(b)(i) of the *Planning Act 2016* to give any development approval subject to development conditions stated in Attachment 1.

For further information please contact the undersigned, on 07 4976 1287 or via email planning@gpcl.com.au.

Yours sincerely



Erin Clark
Principal Planner

Cc: Assessment Manager

Enc. Attachment 1: Referral Agency Conditions

stone Ports Corporation Limited
l 7 4976 1333 · Fax: +61 7 4972 3045 · 40 Goondoon St/PO Box 259, Gladstone QLD, 4680, AUSTRALIA · www.gpcl.com.au
1 965 896 ABN 96 263 788 242

Attachment 1: Referral Agency Advice / Conditions

General

1. Development must be carried out generally in accordance with the Approved plans, except where modified by conditions of this permit.
2. Unless otherwise stated, all conditions must be complied with and completed prior to the commencement of the development.
3. Where additional "approval" is required under these conditions by the Referral Agency (Gladstone Ports Corporation Limited) for drawings or documentation the proponent must submit for review, amend to the satisfaction of, and obtain written approval from the Referral Agency.

   Furthermore, the Referral Agency will require no less than 10 business days, unless otherwise conditioned by the Assessment Manager, to initially assess the drawings or documentation provided prior to the commencement of the development/works.
4. The development must be appropriately designed and constructed to mitigate potential adverse impacts to port operations, services and facilities, and to maintain safe navigable access within Port Limits.
5. The construction of the development must not adversely impact other port users e.g. safe and efficient vessel access throughout Port Limits must be maintained at all times, beyond the construction site.

Engineering

6. Upon completion of the works, the proponent must supply the Referral Agency with RPEQ certified "As Constructed" plans in electronic (CAD format) which illustrate where applicable, all infrastructure and services installed on, under or over Port Limits associated with the activity unless otherwise approved in writing by the Referral Agency.
7. The proponent must inform the Referral Agency of completion of works within Port Limits within 14 days of practical completion and certify that the site is fit for purpose.
8. Any site lighting used during construction / development should not negatively impact on the visibility of Navigational Aids utilised for the primary shipping channels within Port Limits nor illuminate a landward glare beyond the site boundary. Lighting must be reviewed during construction and use of the development with respect to navigation. Where an issue is identified or a validated complaint received, the proponent must immediately rectify to the satisfaction of the Referral Agency.
9. Any material which is deposited or any debris which falls or is deposited within Port Limits (beyond the approved activity) during the construction of the approved development shall be removed by the applicant at their cost and expense. The applicant is to notify the Port Authority if any material or debris is deposited.
10. Upon completion of construction, the applicant shall provide the Referral Agency with written confirmation that the seabed is clear of foreign materials (not approved as part of this notice).
11. If, as a result of the works, or other cause attributable to the proponent, any bank or tidal structure within Port Limits is displaced, the proponent at its cost and expense shall restore the bank or structure to its former condition and take such other action as is necessary to ensure the stability of the bank or structure to the satisfaction of the Regional Harbour Master.

Vessel Management

12. Prior to works within Port Limits commencing, supply to the Referral Agency a Marine Execution Plan that has been approved by the Regional Harbour Master, where relevant.

dstone Ports Corporation Limited
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131 965 896 ABN 96 263 788 242

13. Prior to works within Port Limits commencing, the proponent or their contractor must supply to the Referral Agency for review and approval an Emergency Management Plan for works within Port Limits for all potential incidents e.g. contaminant spill, riverine flood, adverse weather etc.

14. Refuelling of vessels used in construction must be carried out by a licenced bunkers provider only on site, or off site at a licenced refuelling facility.

15. Spillage of any material e.g. sediment, wastes, contaminants etc. must be cleaned immediately. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such materials to any waters.

16. All waste generated on vessels in carrying out the works must be disposed of at a proper and appropriate facility.

Dredge Management Plan

17. At least 10 days prior to the commencement of the use, an Dredge Management Plan (DMP) is to be submitted to the Assessment Manager (the Assessment Manager) for approval, specific to the development that ensures:

    a) environmental risks are identified, managed and continually assessed; and

    b) that staff are trained and aware of their obligations under the DMP, including a copy of the management plan and development approval available on site at all times; and

    c) that reviews of environmental performance are undertaken at least annually; and

    d) any amendments to the DMP are to be submitted to the Assessment Manager for review and approval.

    Once approved by the Assessment Manager, the approved development must be carried out in accordance with this DMP.

    Note: the Assessment Manager has a guideline for the development of environmental management plans that may be utilised in meeting the requirements of this condition.

Incident notification

18. At all times, Gladstone Ports Corporation Environment Hotline (07) 4976 1617 is to be notified of the occurrence of any:

    a) release / spill of contaminants (e.g. fuels / chemicals / sewerage) greater than 20L to land;

    b) release / spill of contaminants (e.g. fuels / chemicals / sewerage) of any amount to water;

    c) any environmental complaints received by the holder of this approval; and

    d) non-compliance with environment related conditions of this approval, or any other environmental approval obtained in relation to the approved activity.

    Note: 'land' is to be defined as where not within a containment system.

19. Environmental incident notification must be included in any Dredge Management Plans for the development.

Gladstone Ports Corporation Limited
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ACN 131 965 896 ABN 96 263 788 242

ADVICE NOTES

A. Where the Applicant is required to submit further documentation to the Referral Agency, this is to be directed to the Planning section at planning@gpcl.com.au, including reference to the allocated referral response number.

B. Where a construction compound or laydown area is required, the proponent or their contractor is required to apply for and obtain a Consent to Enter from the Assessment Manager's Property Specialist via 07 4976 1334 or property@gpcl.com.au prior to works commencing.

C. Where works are to be undertaken outside tenured areas, the proponent or their contractor is required to apply for and obtain a Consent to Enter from GPC's Property Specialist via 07 4976 1334 or property@gpcl.com.au prior to works commencing.

D. The *Environmental Protection Act* 1994 states that a person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm. Environmental harm includes environmental nuisance. In this regard persons and entities, involved in the civil, earthworks, construction, and operational phases of this development, are to adhere to their 'general environmental duty' to minimise the risk of causing environmental harm.

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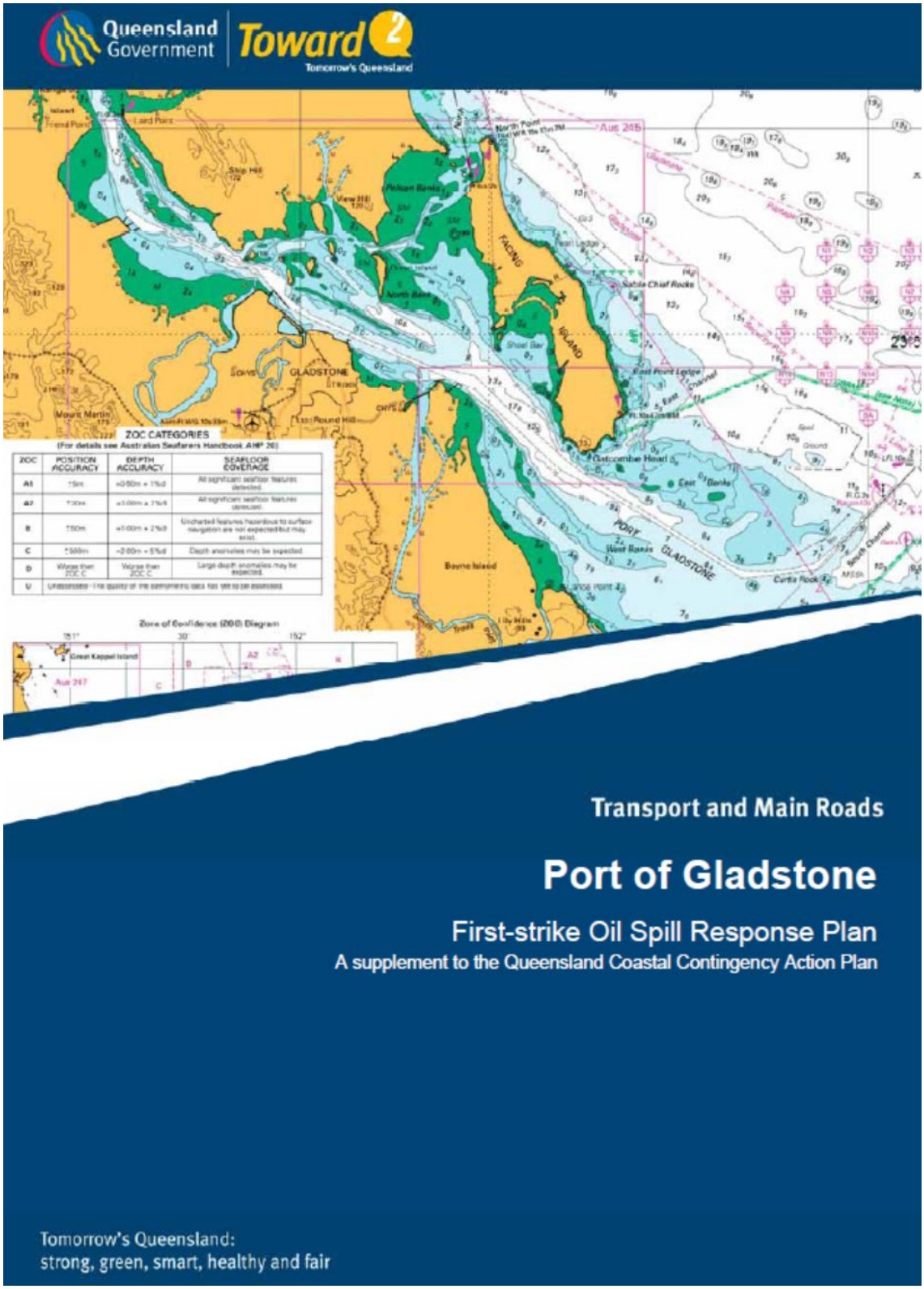
ACN 131 965 896 ABN 96 263 788 242

7.3 Appendix 3 – MSQ First Strike Response Plan – Port of Gladstone & POLREP (Maritime Safety Queensland Marine Pollution Report)



Document control sheet

Prepared by	Maritime Services Branch
Division	Maritime Safety Queensland
Location	Floor 21, Mineral House, 41 George Street, Brisbane 4001
Version no.	4.0
Revision date	4 April 2011
Status	Final
File Number	225/00028

Document sign-off

Version 1 of this document was approved by the Chair of the Queensland National Plan State Committee in July 2006. Subsequent amendments have been of an administrative nature only and have not changed the intent of the document.

Contact for enquiries and proposed changes

If you have any questions or suggested improvements please phone the Manager, Pollution Response on 07 31207411 or email pollution@msq.qld.gov.au

Contents

1 Introduction

This plan has been prepared by the Department of Transport and Main Roads in accordance with the agreed arrangements of Australia's National Plan to Combat Pollution of the Sea by Oil and other Noxious and Hazardous Substances (National Plan) and the requirements of the Transport Operations (Marine Pollution) Act 1995. It is a supplement to the Queensland Coastal Contingency Action Plan.

2 Scope

This plan deals with first-strike response to oil spills from ships and other sources within the port of Gladstone, Queensland. See Appendix A for details of geographical area.

3 Objective

The aim of this plan is to describe the operational arrangements of the Oil Pollution First-Strike Response Deed between Maritime Safety Queensland and the Central Queensland Ports Authority (formerly Gladstone Port Authority). In doing so the plan describes the first-strike response and handover arrangements for oil spills within the port, identifies available resources, and provides key contact information.

The plan is not a stand alone document and should be read in conjunction with:

- the Queensland Coastal Contingency Action Plan
- Maritime Safety Queensland Standard Operating Procedures for oil spill response
- the Oil Pollution First-Strike Response Deed for the port of Gladstone.

4 Roles and Responsibilities

The roles and responsibilities for first-strike response to oil spills within the port limits of Gladstone are defined as follows:

- Maritime Safety Queensland is both Statutory and Combat Agency for response to all ship sourced oil spills.
- Gladstone Ports Corporation is responsible for first strike response, as per the Oil Pollution First-Strike Deed and this contingency plan, to all oil spills within the port limits.
- The Department of Environment and Resource Management (DERM) is the Statutory Agency for land sourced oil spills and is responsible for assuming the role of Environment and Science Coordinator (ESC) for oil and chemical spills in:
  - harbours and working areas of the port outside of the Great Barrier Reef Marine Park, and
  - coastal waters outside the Great Barrier Reef World Heritage Area.
- This role will be exercised in full consultation and cooperation with the GBRMPA.

- The GBRMPA is responsible for assuming the role of ESC where oil or chemical spills occur within the Great Barrier Reef World Heritage Area and adjacent shorelines, excluding those harbours and working areas of the Port which fall outside of the Great Barrier Reef Marine Park. This role will be exercised in full consultation and cooperation with the DERM.
- Maritime Safety Queensland is the Combat Agency for land sourced oil spills, aside from spills from oil terminals, through a memorandum of understanding with EPA.
- The relevant oil company or terminal operator is the designated Combat Agency for first-strike response to oil spills from oil terminals. The cooperative arrangements for response to oil spills by the Australian oil and associated industries are described under the oil industry's AMOSPlan.
- Gladstone Regional Council is responsible for shoreline cleanup operations outside of the port security area under the direction of Maritime Safety Queensland.

Details of the roles and responsibilities may be found in Schedule 1 to the Inter-Governmental Agreement on Australia's National Plan to Combat Pollution of the Sea by Oil and other Noxious and Hazardous Substances.

5 Direction of Maritime Safety Queensland

Maritime Safety Queensland directs the Gladstone Ports Corporation to initiate and carry out first-strike response operations within the port of Gladstone in accordance with Section 8 of this plan.

6 Threat Assessment

In 2010, Maritime Safety Queensland commissioned a semi-qualitative risk analysis of oil spills from ships over 10 metres in length for all ports in Queensland. The results of the study show there is a risk of an oil spill occurring within the port of Gladstone, with the main risk factors being land-based spills, the frequency of small spills, refuelling activities and navigational hazards within the port. The port also has a high sensitivity rating.

The port of Gladstone contains a number of diverse environments, some of which are highly sensitive to the effects of marine pollution. These include large areas of mangroves, intertidal flats and seagrass beds close to the shipping channel and port area. Other areas, particularly The Narrows, are extremely sensitive to the environmental effects of oil spills. Similarly the Gladstone marina, Auckland Creek and Barney Point beach, as well as the islands within the harbour, are important recreational areas for the local community.

While the risk of a significant oil spill in the port is small, a number of activities that regularly occur in the port do present a credible threat. These activities include:

- large trading ships entering and leaving the port via a narrow channel
- oil product tankers discharging oil products at South Trees and Auckland Point Berths
- Chemical tankers discharging Caustic Soda at South Trees Wharf, Fisherman's Landing #2 Berth and Bulk Liquid Ammonia at Fisherman's Landing #5 Berth
- Large trading ships calling to load bunkers
- Large trading ships bunkering whilst undertaking cargo operations

- large trading ships coming in contact with berths or other ships
- significant commercial shipping activity and refuelling operations in the Marina
- commercial and recreational shipping activity in Auckland Creek and the adjacent marina
- commercial and recreational shipping activity in the Boyne River.

7 Possible Spill Scenarios

The most common type of oil spills likely to occur in the port are small spills of petrol, diesel fuel or bilge oil from commercial or recreational ships or shore based activities. However it is also possible that the following types of spills may occur within the port.

- 300 tonnes of heavy fuel oil from trading ships resulting from serious contact incidents
- 10 tonnes of petroleum products, including heavy fuel oil, during cargo transfer operations at anchorages and berths during bunkering operations
- 5 tonnes of petroleum products, including heavy fuel oil, during bunkering operations associated with the bunker barge *Larcom*.

While each of the scenarios listed above could escalate beyond what is generally termed 'first-strike response', prompt and effective action will help limit the effects of a spill.

8 Response Options

The following guidelines apply to first-strike response within the port.

Area	Monitor	Contain Recover	Protect Resources	Shoreline Cleanup	Apply Dispersant
Gladstone Marina	Yes	Yes	If viable	If viable	No
Auckland Creek	Yes	If viable	If viable	If viable	No
Fisherman's Landing	Yes	If viable	If viable	If viable	If viable
Clinton Wharves	Yes	If viable	If viable	If viable	If viable
Auckland Point Wharves	Yes	If viable	If viable	If viable	If viable
Barney Point Wharf	Yes	If viable	If viable	If viable	If viable
South Trees Wharf	Yes	If viable	If viable	If viable	If viable
Boyne Wharf	Yes	If viable	If viable	If viable	If viable
Areas seaward of Facing Island	Yes	If viable	If viable	If viable	If viable
Boyne River	Yes	If viable	If viable	If viable	No

Note : Any decision to use dispersants within the port area should be made in accordance with the dispersant use policy and guidelines outlined in the Queensland Coastal Contingency Action Plan. Under the guidelines:

- Prescribed Officers from GBRMPA, AMSA and Maritime Safety Queensland may authorise the use of dispersants within areas of the port that lie within the Marine Park

- Prescribed Officers from AMSA and Maritime Safety Queensland, in consultation with EPA, may authorise the use of dispersants in port areas that are outside the Marine Park.

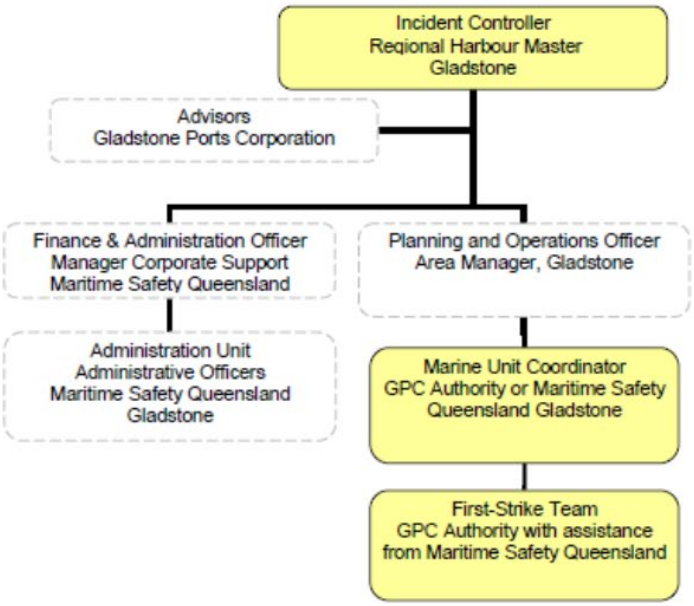
9 Response and Handover Arrangements

Early first-strike response action should include an assessment of the time and resources required to effectively manage each incident. Where a response is likely to be prolonged or exceed the port's first-strike response capacity, GPC should request assistance from Maritime Safety Queensland. When determining the need for assistance and hand-over of the response, GPC should consider the number and availability of local trained response personnel, their ability work safely without the need for excessive work hours, and the capacity of the ports' first-strike response equipment. Requests for assistance should be made as soon as possible and preferably in the first or subsequent SITREPs.

10 Incident Control Centre

The Incident Controller may elect to establish an Incident Control Centre (ICC) to aid in management of an incident within the port. If required, the ICC will be established in the office of the Regional Harbour Master (Gladstone).

11 Response Team Structure



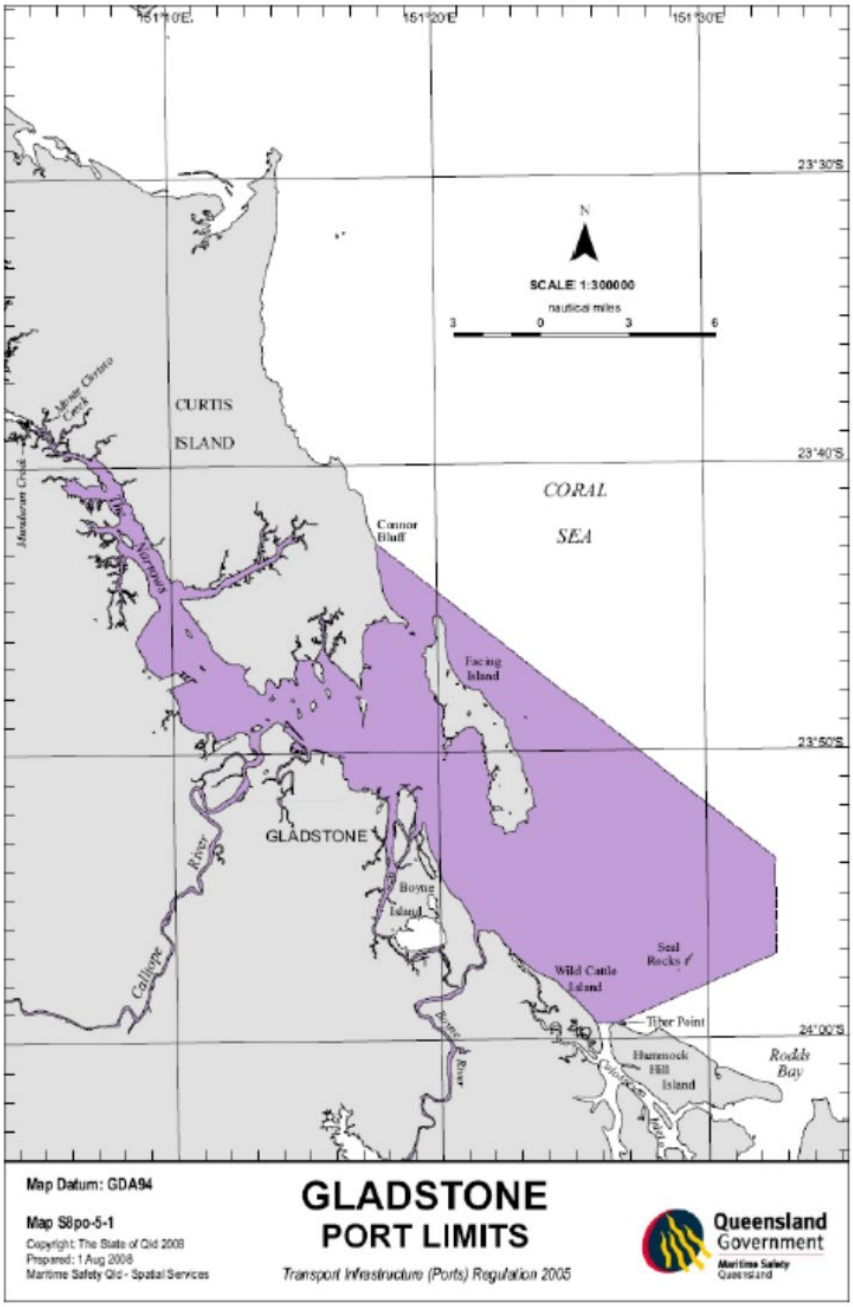
12 First-Strike Equipment

Equipment	Maritime Safety Queensland Marine Operations Base Alf O'Rourke Drive, Gladstone
Boom (Structurflex GP)	300 metres
Boom (Structurflex Land/Sea)	60 metres
Skimmer (Foilex weir and Spate pump)	1
Container (10m³ Flexidam)	2
Anchor Kit	1
Sorbent Boom	120 metres
Sorbent Pads	500 pads
Sorbent Mops	150 mops

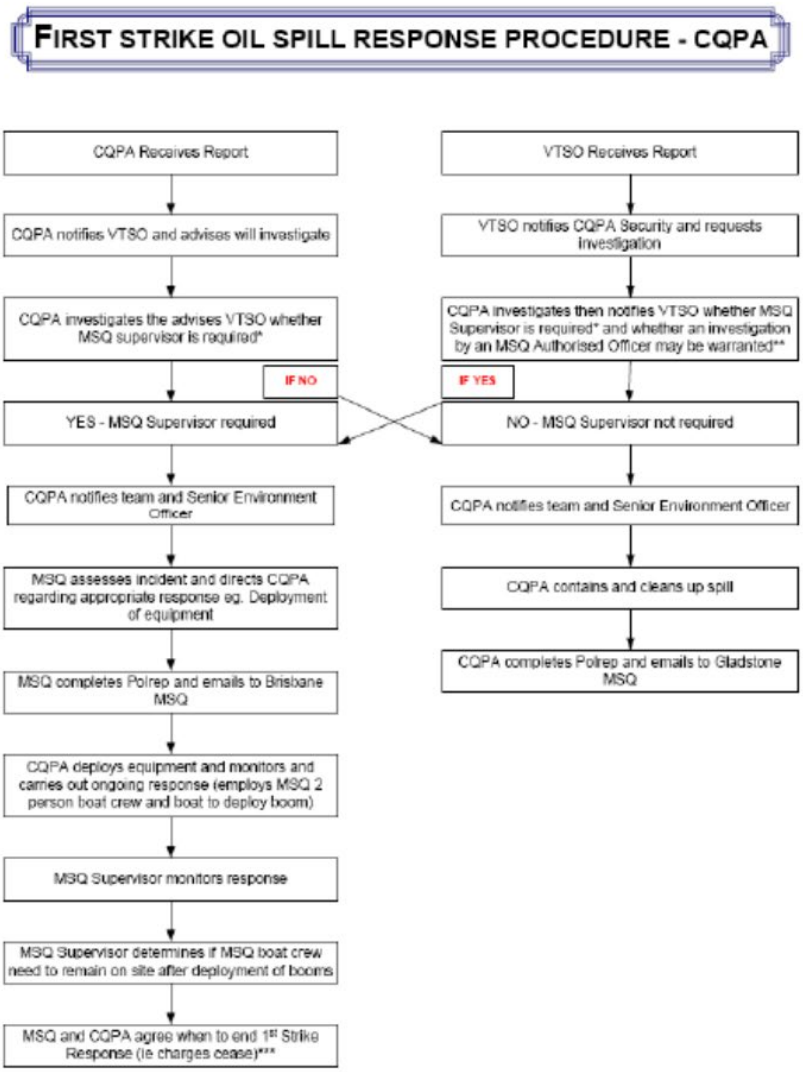
13 Contact List

Role	Position	Phone	Mobile
Gladstone Port Control	Duty VTS Officer	4973 1208	24 hours
MSQ Incident Controller	Regional Harbour Master, Gladstone	4973 1200	0407 878852
Planning & Operations Officer	Assistant Harbour Master (Gladstone)	4973 1208	0428 113089
Finance & Administration Officer	Manager Corporate Support, MSQ Gladstone	4973 1200	0409 340365
Marine Unit Coordinator	Gladstone Ports Corporation	4976 1333	24 hours
Environment and Science Coordinator for spills that are unlikely to impact the GBRMP	Environmental Protection Agency	4971 6500 0427 401931 0408 758802	1300 130372 24 hours 0427 401931 0408 758802
Environment and Science Coordinator for spills that are likely to impact the GBRMP	GBRMPA	4750 0700	24 hours 3830 4919 quote 'oil spill'
Shoreline Cleanup Coordinator	Gladstone Regional Council, (Health Leading Hand)	0407 379906 or 4970 0700	After hours Emergency 4979 1134

Appendix A – Map of Gladstone Port Limits



Appendix B – CQPA Oil Spill Response Procedure



Marine Pollution Report (POLREP)

Queensland Government
Maritime Safety Queensland

To: **Pollution Response Unit** Fax number: **(07) 3120 7420**

Urgent ☐ **Standard** ☐ **Information only** ☐

This form is used to record the initial details of a reported/sighted marine pollution spill. The form is faxed to the Pollution Response Unit on the fax number listed.

Date of incident | Time of incident

POLREP ID number
Incident investigation Yes ☐ No ☐
Marine incident number
Category

Location of pollution

Lat | Long

Location

Pollution source Ship ☐ Land ☐ Unknown ☐

Ship type Recreational ☐ Commercial ☐ Fishing ☐ Trading ship ☐ Tanker ☐

Ship name | Ship registration

Pollutant

Sheen ☐ Diesel ☐ Bilge ☐ HFO ☐ Other ☐

Extent

Size of the slick (length and width in meter) | or | Litre

Report details

Has the discharge stopped? Yes ☐ No ☐ Unknown ☐

Weather conditions (tide and wind)

Photos taken ☐ Video taken ☐ Samples taken ☐ Sample taken by

Original report source

Statutory agency | Combat agency

Initial response brief

Sender details

Name | Position

Agency | Contact phone (mobile/office) | Fax number

Signature | Date | Time

Document & Forms Management
Form F3068 E0
Apr 2006

7.4 Appendix 4 – GPC PoG Maintenance Dredging risk assessment for scheduling (V12)

Risk assessment for scheduling annual maintenance dredging at the Port of Gladstone

7 November 2023

To ensure the safe passage of vessels through the Port of Gladstone (PoG), Gladstone Ports Corporation (GPC) conducts annual maintenance dredging using the *Trailing Suction Hopper Dredger* (*TSHD) Brisbane.*

This risk assessment is to inform the scheduling process for the *TSHD Brisbane* and provides information to:

- determine if there are any PoG specific risks associated with the scheduling of maintenance dredging by the *TSHD Brisbane* with a focus on environmental windows impacting key environmental values;
- identify if any changes in current control measures are required; and
- demonstrate GPC's dredging activities are managed in alignment with the principles of the Maintenance Dredging Strategy (MDS).

In November 2016, the Queensland Department of Transport and Main Roads (TMR) released the MDS for Great Barrier Reef World Heritage Area Ports: Technical Supporting Document; which identified the PoG's environmental values, their distribution and environmental windows, which include seagrasses, corals and marine megafauna and their recruitment / breeding periods. It also documented an Environmental Review and Risk Assessment which provided a summary of risks from maintenance dredging and dredge material placement activities to the environmental values that have the greatest potential to be influenced by these activities. Through this process, the PoG was identified as Low Risk with a High Confidence level.

Under GPC's Environmental Management System (EMS), all environmental risks are assessed and recorded in GPC's risk management system in accordance with GPC's Risk Management Policy and Standard.

The risk assessment in Table 1 is an extract from GPC's risk management system which was subsequently modified to ensure it aligned with the Environmental Review and Risk Assessment in the MDS Technical Supporting Document. It uses the definitions of risk consequences, likelihood and hazard grades adopted for the Great Barrier Reef Region Strategic Assessment: Strategic Assessment Report, Great Barrier Reef Marine Parks Authority, Gladstone, which is provided in Appendix A. This process ensures that there is an annual review of the information used to inform the development of the *TSHD Brisbane's* state wide annual maintenance dredging schedule.

Overview

The risk assessment indicates that all risks associated with maintenance dredging at the PoG in 2024 are **Low** as a result of implementing the identified management controls.

While no new management controls are required, to assist in turtle protection, GPC added two (2) additional controls in 2018 to align with the Recovery Plan for Marine Turtles in Australia 2017-2027 (the Recovery Plan), and gain a better understanding of turtle fatalities in the PoG. These include:

1. Development of protocols for multiple marine megafauna fatalities to temporarily halt dredging until investigation is complete and corrective actions (where identified) have been applied.
2. Notification of opportunistic marine megafauna finds, where the remains (carcass or parts thereof) will be retrieved and stored appropriately for analyses.

These controls have been developed in accordance with specialist advice received from the Department of Environment and Science (DES).

All other existing controls for the protection of seagrasses, coral, marine megafauna and for the mitigation of risks associated with weather events, have been in place for many years and their application and effectiveness is well understood.

As a result, it is proposed that no environmental windows are required for maintenance undertaken by the *TSHD Brisbane* at the PoG. The ecological and environmental timings relevant to the PoG that were considered in this assessment are included in Appendix B. All management controls identified through this process have been documented in GPC's PoG Environmental Management Plan (EMP) for Maintenance Dredging.

Table 1. Scheduling risk assessment for *TSHD Brisbane* maintenance dredging: Port of Gladstone – 2023

		Inherent risk			Residual risk	
Threat	**Description and risk commentary**	**Likelihood and consequence**	**Risk**	**Management controls**	**Likelihood and consequence**	**Risk**
Seagrass and seagrass recruitment Potentially impacted to elevated turbidity and in turn reduction in benthic light and/or sedimentation as a result of dredge plumes or dredge material relocation.	Seagrass communities occur throughout PoG with intertidal, subtidal and deep water seagrass meadows present. The intertidal and subtidal seagrasses have been monitored, at least once a year, since 2002.Seagrass in PoG is diverse and variable between years and highly seasonal. In October 2022, the overall seagrass condition was satisfactory after three years of good condition and with an extended period of poor or satisfactory seagrass condition prior to 2019. Seven of the fourteen annual monitoring meadows were in a good to very good condition and a further two in satisfactory condition. The large Pelican Banks meadow adjacent to Curtis Island decreased in biomass and the proportion of *Zostera muelleri* to be in poor condition after being in satisfactory condtion in 2021. All meadows in the Western Basin, the Narrows and South Trees Inlet were in good or very good condition, except for one ephemeral deep-water meadow	Unlikely/ Insignificant	Low	Seagrass communities, management tools and health and growth requirements are very well understood in Gladstone. Comprehensive seagrass, water quality and light monitoring programs have been in place for many years. No adverse impacts from maintenance dredging have been detected. Existing management controls are demonstrably effective. e.g. GPC Controls Management and Monitoring Plans and Procedures which include: * Hydrodynamic modelling of estimated volumes, * Assessment of modelled impacts against known sensitive receptor thresholds, * Monitoring in alignment with modelling, * Monitoring and triggers for sensitive receptors * Passage Island (<6 mol/m^2/day on a 14 day	Unlikely/ Insignificant	Low

		Inherent risk			Residual risk	
Threat	**Description and risk commentary**	**Likelihood and consequence**	**Risk**	**Management controls**	**Likelihood and consequence**	**Risk**
	(Meadow 7) and Meadow 8 north of Fisherman's Landing that were in satisfactory condition. Monitoring of deep-water seagrass adjacent to the East Banks Sea Disposal Site (EBSDS) in 2019 had shown that there was minimal change in condition of seagrass, thus indicating that the placement of dredge material at the EBSDS is having little impact on the adjacent seagrass meadow. This monitoring is due to be undertaken in 2024. During the activity based monitoring program undertaken in 2023 (pre, during and post dredging) light levels at the BPAR monitoring site remained above the threshold limit.			rolling average of BPAR applied conservatively in both the growing and senescent season), * Adaptive management processes, and * Long term monitoring of seagrass communities. Contractor controls - detailed in *TSHD Brisbane* EMP * Engineering controls on *THSD Brisbane* e.g. Green valves (anti-turbidity), below keel discharge. * Notification requirements, * Dredging and material relocation locations and volumes as per the defined requirements of GPC's approvals.		
Corals Potentially impacted due to elevated turbidity, reduction in benthic light and sedimentation	Coral reef habitats include shallow fringing and subtidal reefs within PoG, near North and South Entrances and along Facing Island. Surveys undertaken of the reef communities along the eastern side of Facing Island in 2023 showed that there are essentially two major	Possible/ Insignificant	Low	Existing management controls are demonstrably effective. For example. GPC Controls	Unlikely/ Insignificant	Low

		Inherent risk			Residual risk	
Threat	**Description and risk commentary**	**Likelihood and consequence**	**Risk**	**Management controls**	**Likelihood and consequence**	**Risk**
as a result of dredge plumes or dredge material relocation.	community types within the monitored sites. Firstly, outer Facing Island sites and Rundle Island sites were highly similar and were coral dominated, without the macroalgae *Sargassum*. The other major community type included sites closer to the harbour entrance, which was dominated by macroalgae and the coral genus *Turbinaria*. Since 2018, there has been little improvement in sites at Facing Island (some non-statistically significant increases in coral cover), and a fairly large reduction in coral cover was observed at one site (FAC3). This site has become more 'harbour entrance-like', as its living coral cover has reduced and its macroalgal cover has increased, and one of the most tolerant genera of corals *Turbinaria* has increased in cover. In contrast, the regional reference sites (Rundle Island), have improved, with coral cover increasing. There were very minor changes in coral disease and low numbers of coral recruits at all sites. The decline in coral cover at one of the Facing Island sites (FAC3) is intriguing because it is not widespread across Facing Island, and out of context with changes at Rundle Island and the greater region. It is perhaps more likely that the reduction in coral			Management and Monitoring Plans and Procedures which include: * Hydrodynamic modelling, * Assessment of modelled impacts against known sensitive receptor thresholds, * Monitoring in alignment with modelling, * Monitoring and water quality triggers for turbidity and adaptive management processes * Long term monitoring of reef communities Contractor controls - detailed in *TSHD Brisbane* EMP * Engineering controls on *THSD Brisbane* e.g. Green valves (anti-turbidity), below keel discharge; * Notification requirements, * Dredging and material relocation locations and volumes as per the defined requirements of GPC's approvals.		

		Inherent risk			Residual risk	
Threat	**Description and risk commentary**	**Likelihood and consequence**	**Risk**	**Management controls**	**Likelihood and consequence**	**Risk**
	cover at FAC3 is related to localised changes in water quality or patterns in local disease or predation. Therefore, it is unlikely that maintenance dredging activities (re-mobilised sediments) result in long-term changes to adjacent reef communities. Overall, the 2022 results demonstrate the continued lack of recovery of coral communities within Gladstone Harbour. Annual surveys undertaken of permanent coral monitoring locations within PoG for the Gladstone Healthy Harbour Partnership (GHHP) showed an improvement in coral condition from 2015 to 2017 despite coral cover still remaining poor in 2017. GHHP surveys undertaken from 2018 to 2022 showed a decline in coral condition. This continued trend was the result of low cover of living coral, high macroalgal cover, low abundance of juvenile corals, and a poor score for change in hard coral cover at most of the surveyed reefs. While coral cover was low at all reefs surveyed, the coral cover at Seal Rocks South has steadily increased since 2018.					

		Inherent risk			Residual risk	
Threat	**Description and risk commentary**	**Likelihood and consequence**	**Risk**	**Management controls**	**Likelihood and consequence**	**Risk**
	The continued decline to very low densities of juvenile corals observed in 2022 is likely influenced by multiple processes. Ongoing pressures such as high macroalgal cover and the widespread presence of the bio-eroding sponge *Cliona orientalis* appear to be hindering the recovery of the coral communities in Gladstone Harbour which along with the high water temperatures in early 2020 are likely to have reduced juvenile densities by increasing the mortality rate of settled corals or potentially limiting the fecundity of adult corals over the late 2020 spawning season. However, based on dredge plume monitoring, modelling studies, and surveys, it is considered extremely unlikely that sediment plumes created by the activity are driving these spatial patterns. Both monitoring and modelling indicate that sediment plumes created by the activity are short- term features (measurable for < 1 hour) that do not have significantly large enough concentrations to impact reef communities.					

		Inherent risk			Residual risk	
Threat	**Description and risk commentary**	**Likelihood and consequence**	**Risk**	**Management controls**	**Likelihood and consequence**	**Risk**
Coral spawning Potentially impacted by dredging related high suspended sediment and settlement levels as a result of dredge plumes or dredge material relocation.	Coral spawning occurs on the full moon for up to six (6) days usually in October or November, but potentially December depending on presence of suitable conditions. See coral description provided above.	Unlikely/ Insignificant	Low	Existing management controls are demonstrably effective. e.g. GPC Controls Management and Monitoring Plans and Procedures which include: * Hydrodynamic modelling, * Assessment of modelled impacts against known sensitive receptor thresholds, * Monitoring in alignment with modelling, * Monitoring and water quality triggers for turbidity and adaptive management processes * Long term monitoring of reef communities Contractor controls - detailed in *TSHD Brisbane* EMP * Engineering controls on *THSD Brisbane* e.g. Green valves (anti-turbidity), below keel discharge; * Notification requirements,	Unlikely/ Insignificant	Low

		Inherent risk			Residual risk	
Threat	**Description and risk commentary**	**Likelihood and consequence**	**Risk**	**Management controls**	**Likelihood and consequence**	**Risk**
				* Dredging and material relocation locations and volumes as per the defined requirements of GPC's approvals		
Marine megafauna breeding Potentially impacted as a result of dredge strike or entrainment.	The ocean side of Curtis Island is an index beach for a medium density population of nesting Flatback turtles as recognised by the Recovery Plan. Green and loggerhead turtles are also known to nest along this beach and beaches within the region. While not formally recognised by the Recovery Plan, the PoG does represent a foraging area for green turtles. The majority of the Green turtles within PoG forage over the inter-tidal and sub-tidal flats adjacent to outside and inside of the outflow areas of the estuaries. Australian humpback dolphins occur throughout the PoG and bottlenose dolphins have been observed on the ocean sides of Facing and Curtis Islands.	Unlikely/ Minor	Low	Existing management controls have been effective with no marine megafauna strikes. e.g. GPC Controls Management and Monitoring Plans and Procedures which include: Long term monitoring of marine megafauna Contractor controls - detailed in *TSHD Brisbane* EMP * Ensuring turtle deflectors are fitted to drag heads, * Visual monitoring prior to relocation activities, * Opportunistic monitoring in vessel hopper, Protocols on retrieved megafauna to allow for DES to retrieve and analyse, * Protocols for marine megafauna multiple strike, which may include halting dredging,	Unlikely/ Minor	Low

		Inherent risk			Residual risk	
Threat	**Description and risk commentary**	**Likelihood and consequence**	**Risk**	**Management controls**	**Likelihood and consequence**	**Risk**
	Dugongs occur throughout PoG and this region is recognised as a Dugong Protection Area B under State legislation. Humpback whales make their annual migration through the Great Barrier Reef region from June to August. Individual whales have been sighted within the PoG. Turtle strike data provided by PBPL indicates that five (5) turtles have been captured during maintenance dredging in the PoG since 2000, which all occurred prior to 2011. Based on validated modelling results, most sensitive receptors (including seagrasses and corals) are unlikely to be affected by maintenance dredging plumes. Therefore no flow on effects to marine megafauna is expected.			* Notification requirements for strikes and finds of marine megafauna		
Extreme Weather Potential impacts to environmental resources and water quality may occur as a	Severe weather events have the potential to increase the volume of accumulated material in shipping channels and berth pockets, which can present additional operational and environmental hazards. Severe weather in Gladstone usually	Rare/ Insignificant	Low	GPC has experienced evaluated turbidity before, during and after dredging. This data has been evaluated against weather (wind, rain and tide) and found that Port of Gladstone is influenced by weather events and that no discernible impact has been found on sensitive receptors from the activity.	Rare/ Insignificant	Low

		Inherent risk			Residual risk	
Threat	**Description and risk commentary**	**Likelihood and consequence**	**Risk**	**Management controls**	**Likelihood and consequence**	**Risk**
result of dredging immediately following an extreme weather event.	occurs between December and March (BOM data 1957-2019) and therefore relocation of this accumulated material immediately following an event at this time of the year would have negligible to no impact on spawning, breeding or recruitment.			GPC Controls Management and Monitoring Plans and Procedures which include: * Emergency management section gives guidance for extreme events that allows for risk assessment jointly between PBPL and GPC to determine what additional controls to employ. The actions could also include halting dredging, and are dependent on the risk to the environment and the vessel.		

Appendix A

Risk ratings as per: *Great Barrier Reef Region Strategic Assessment: Strategic assessment report, GBRMPA, Gladstone* (GBRMPA, 2014)

Consequence description and definition

Consequence	Extent of the impact based on current management	
	Broad scale	**Local scale**
Catastrophic	Impact is clearly affecting, or would clearly affect, the nature of the value over a wide area. Recovery periods greater than 20 years likely.	
Major	Impact is, or would be, significant at a wider level. Recovery periods of 10 to 20 years likely.	Impact is, or would be, extremely serious and possibly irreversible to the condition of a value. Condition of the affected value possibly irretrievably compromised.
Moderate	Impact is, or would be, present at a wider level. Recovery periods of 5 to 10 years likely.	Impact is, or would be, extremely serious to the condition of a value and possibly irreversible over a small area. Recovery periods of 10 to 20 years likely.
Minor	Impact is, or would be, not discernible at a wider level. Impact would not impair the overall condition of the value, including sensitive populations or communities, over a wider level.	Impact is, or would be, significant to the condition of value at a local level. Recovery periods of 5 to 10 years likely.
Insignificant	No impact or if impact is, or would be, present then only to the extent that it has no discernible effect on the overall condition of the value.	No impact or if impact is, or would be, present then only to the extent that it has no discernible effect on the overall condition of the value.

Note: Recovery periods relate to major capital dredging programs and not maintenance dredging.

Likelihood description and frequency

Likelihood	Expected frequency of a given threat
Almost certain	Expected to occur more or less continuously throughout a year
Likely	Not expected to be continuous but expected to occur one or more times in a year
Possible	Not expected to occur annually but expected to occur within a 10-year period
Unlikely	Not expected to occur in a 10-year period but expected to occur in a 100-year period
Rare	Not expected to occur within the next 100 years

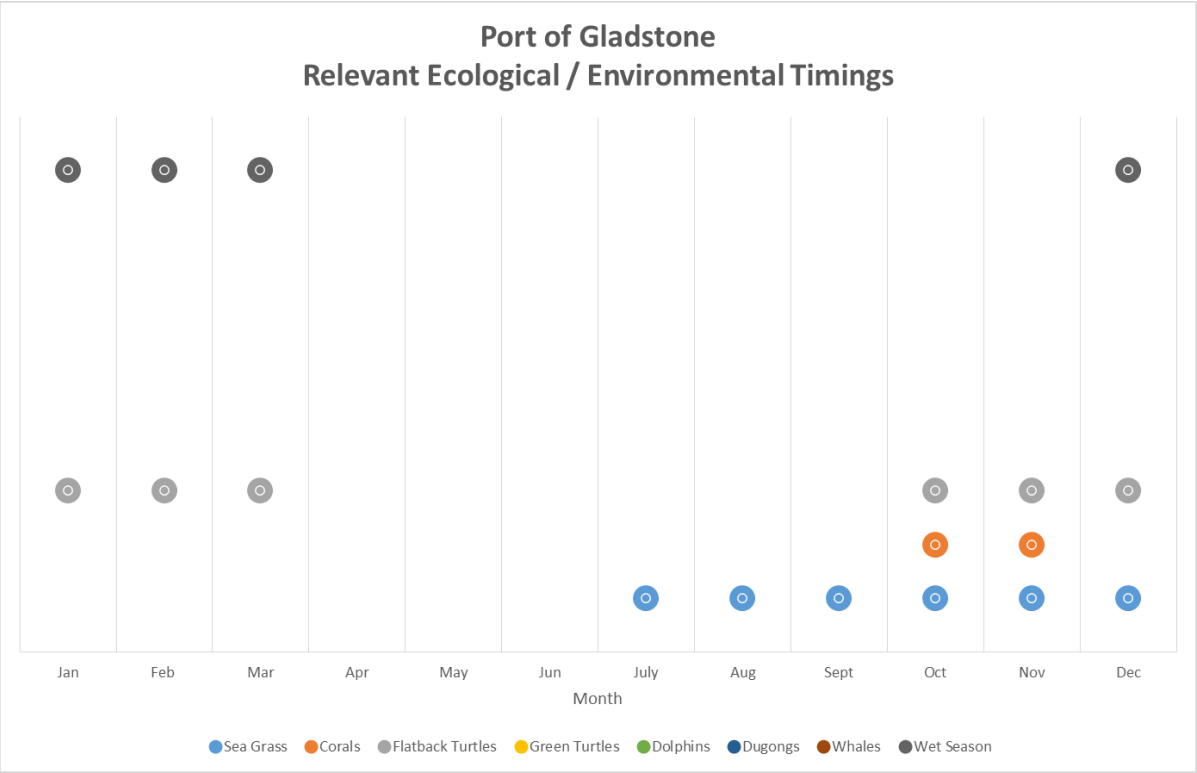
Hazard Risk Grades

	Consequence				
Likelihood	**Insignificant**	**Minor**	**Moderate**	**Major**	**Catastrophic**
Almost Certain	Low	Medium	High	Very high	Very high
Likely	Low	Medium	High	High	Very high
Possible	Low	Low	Medium	High	Very high
Unlikely	Low	Low	Low	Medium	High
Rare	Low	Low	Low	Medium	High

Appendix B

Port of Gladstone Ecological / Environmental Timings

Subject Matter	Event and Time period/s
Seagrass	Growing Season: July to December.
Corals	Spawning: Inshore reefs – up to 6 days after the first full moon in October. GBR region – up to 6 days after the first full moon in November. Can vary according to suitable conditions.
Flatback turtles	Mating: Unknown. Nesting: October to January (peak: late November to early December). Hatching: December to March (peak: February).
Green turtles	Foraging: all year round in PoG, therefore not included in the graph (not documented in the Recovery Plan for this area but known from other studies).
Loggerhead turtles	While known to be present, limited understanding of use of PoG.
Dolphins	No known significant events or time periods.
Dugongs	No known significant events or time periods.
Whales	Migration through GBR region: June to August.
Wet / Cyclone Season	Generally December to March.


Port of Gladstone
Relevant Ecological / Environmental Timings
Jan
Feb
Mar
Apr
May
Jun
July
Aug
Sept
Oct
Nov
Dec
Month
Sea Grass
Corals
Flatback Turtles
Green Turtles
Dolphins
Dugongs
Whales
Wet Season

7.5 Appendix 5 – Revision history

Revision date	Revision description	Authors	Endorsed by	Approved by
11/12	Version 1: Developed, approved and published under SD2007/0627	Anthea Bennett / Terese Tobin		
11/12	Version 2: Updated following internal audit under SD2007/0627	Anthea Bennett / Terese Tobin		
11/13	Version 3: Approved version under variation of SD2007/0627	Anthea Bennett/ Terese Tobin		
01/14	Version 4: Approved version under SD2012/2362	Anthea Bennett / Terese Tobin		
06/14	Version 5: Tracked change version for July campaign under SD2012/2362	Anthea Bennett / Terese Tobin		
08/14	Version 6: Approved version under variation to SD2012/2362 & SD2014/2862	Anthea Bennett / Terese Tobin		
05/15	Version 7: Version for SD2015/3002	Anthea Bennett / Terese Tobin		
07/16	Version 8: Annual Review	Terese Tobin		
07/17	Version 9: Annual Review	Terese Tobin		
03/18	Version 10-13: Review and approved for new Sea Dumping Approval SD2018/3762 and new LMDMP	Terese Tobin		
04/19	Version 13a: Administrative Amendment (not requiring DCCEEW authorisation) comprising of an annual review, addition of process for scheduling and reporting requirements and review of LMDMP section.	Terese Tobin		
07/20	Version 14-17: Administrative Amendment (not requiring DCCEEW authorisation) comprising of an annual review and move to new formatting.	Terese Tobin	Port Infrastructure Manager Owen Barton	PSD General Manager (delegate) Port Infrastructure Manager Owen Barton
08/21	V18 Administrative Amendment (not requiring DCCEEW	Terese Tobin	Specialist - Harbours & Channels	Port Infrastructure

	authorisation) comprising of an annual review and minor formatting.			Manager Owen Barton
06/22	V19a-b Administrative Amendment (not requiring DCCEEW authorisation) comprising of an annual review and minor formatting.	Terese Tobin	Specialist - Harbours & Channels	Port Infrastructure Manager Owen Barton
27/06/2023	V20/ 20a: Addition of In-Channel MRA as an additional relocation option (triggering DCCEEW approval requirements). Minor administrative edits, including language changes.	Terese Tobin	Specialist - Harbours & Channels	Executive General Manager Marine Operations Sharad Kohli
24/11/2023	V-21 Amendment to implement SD2018/3762 V2	Terese Tobin	Specialist - Harbours & Channels	Executive General Manager Marine Operations Sharad Kohli
29/02/2024	V22 Amendment to implement SD2023-4051	Terese Tobin	Specialist - Harbours & Channels	Specialist - Harbours & Channels