Port Expansion Project EIS

Part C

Section C2.3 – Vessel Traffic Management Plan (Construction)

AECOM BMT WBM

(C2.3)1 Background and Scope

(C2.3)1.1 Introduction

The interactions and potential impacts for vessel management have been considered between the construction works, continuing port operations and other existing vessel activities. This Vessel Traffic Management Plan – Construction (VTMPC) documents the vessel traffic management requirements for construction works and forms part of the set of PEP Environmental Management Plans.

This plan seeks to address potential vessel traffic and safety issues identified in relation to vessel operations associated with the construction phases of the Port Expansion Project (PEP). This is because a vessel collision, grounding or sinking can result in unplanned emissions or other potential consequences on marine environmental qualities and/or damage to property and human health and risk to safety and revenue.

The other management plan closely associated with the VTMPC and applicable to the construction stages is the Dredge Management Plan (Section C2.1). The Dredge Management Plan identifies the preferred means of addressing environmental matters associated with capital dredging (and associated dredge vessels), whereas the VTMPC addresses navigational safety issues for all vessels during construction phases.

The VTMPC will be also be used as a reference document for Port of Townsville Limited (POTL) tender documentation for selecting preferred dredging and marine construction contractors following completion of the EIS process.

(C2.3)1.2 Purpose of the VTMPC

The construction phases of the PEP will generate vessel traffic that has the potential to impact on vessel and marine safety and obstruct navigation including of trade shipping into the port. The VTMPC is necessary to meet the requirements of applicable environmental legislation, achieve best practice management of vessel traffic in relation to the PEP construction and to aid in achieving the requirements of both POTL and the relevant authorities.

It describes the measures to be implemented for monitoring and controlling vessel operations to achieve the following broad objectives:

- Provide evidence of practical and achievable plans for the management of construction vessel operations such that vessel safety is preserved and prevents obstructing the navigation of other traffic (such as shipping, commercial vessels, tugs, pilot boats, military vessels or recreation traffic).
- Provide a framework for the development of contractor specific VTMPCs to be prepared by the contractors.
- Provide POTL and regulatory authorities with a framework to confirm compliance with requirements.
- Provide the community with evidence of that the management of construction vessels will be conducted in a manner that supports safe navigation for recreation vessels.

The key Commonwealth and State legislation and regulations relevant to operations of vessels and dredging are described in Chapter B18 of the EIS.

(C2.3)1.3 Structure of the VTMPC

The VTMPC has been structured to address the vessel operation requirements for the construction of the PEP as follows:

- A description of the expected vessels and marine plant that will be used for the PEP construction works.
- Vessel management measures to be addressed during the construction stages of the PEP.
- An overview of legislative requirements associated with construction vessel operations.
- A description of the roles and responsibilities for implementation of the VTMPC.

- Provides an overarching VTMPC and a framework for the development of contractor specific VTMPC.

A detailed description of the PEP marine infrastructure is provided in Part A, while port operations are discussed in Section B18 of the EIS.

(C2.3)1.4 Project Overview

POTL proposes development of a new outer harbour, wharves, channel deepening, backing land, and associated infrastructure to support new berths (for cargo handling), collectively known as the Port Expansion Project (PEP). Development of the PEP is based on a clear strategy aimed at providing for future trade, in line with the *Port of Townsville Master Plan* (Maunsell AECOM, 2007) forecasts. The PEP will allow POTL to:

- satisfy its responsibility under the *Transport Infrastructure Act 1994* (TI Act) including establishment, management, and effective and efficient development and operation of port facilities
- respond to forecast trade growth and provide essential trade pathways for current and future trades in accordance with the National Ports Strategy (IA, 2010), thereby enhancing the economic prosperity of the region
- provide infrastructure for import and export of bulk and general cargo through the Port of Townsville for operations under competitive market conditions
- establish and maintain strong links between the local, regional, state, national and global economies
- accommodate future trends in global shipping practices
- facilitate redevelopment of the port.

The PEP will result in

- sufficient future capacity being delivered ahead of expected demand, avoiding bottlenecks or capacity constraints at the port on trade growth opportunities
- sufficient flexibility to accommodate demand, especially if trade growth driven by the mining sector growth is more rapid than predicted.

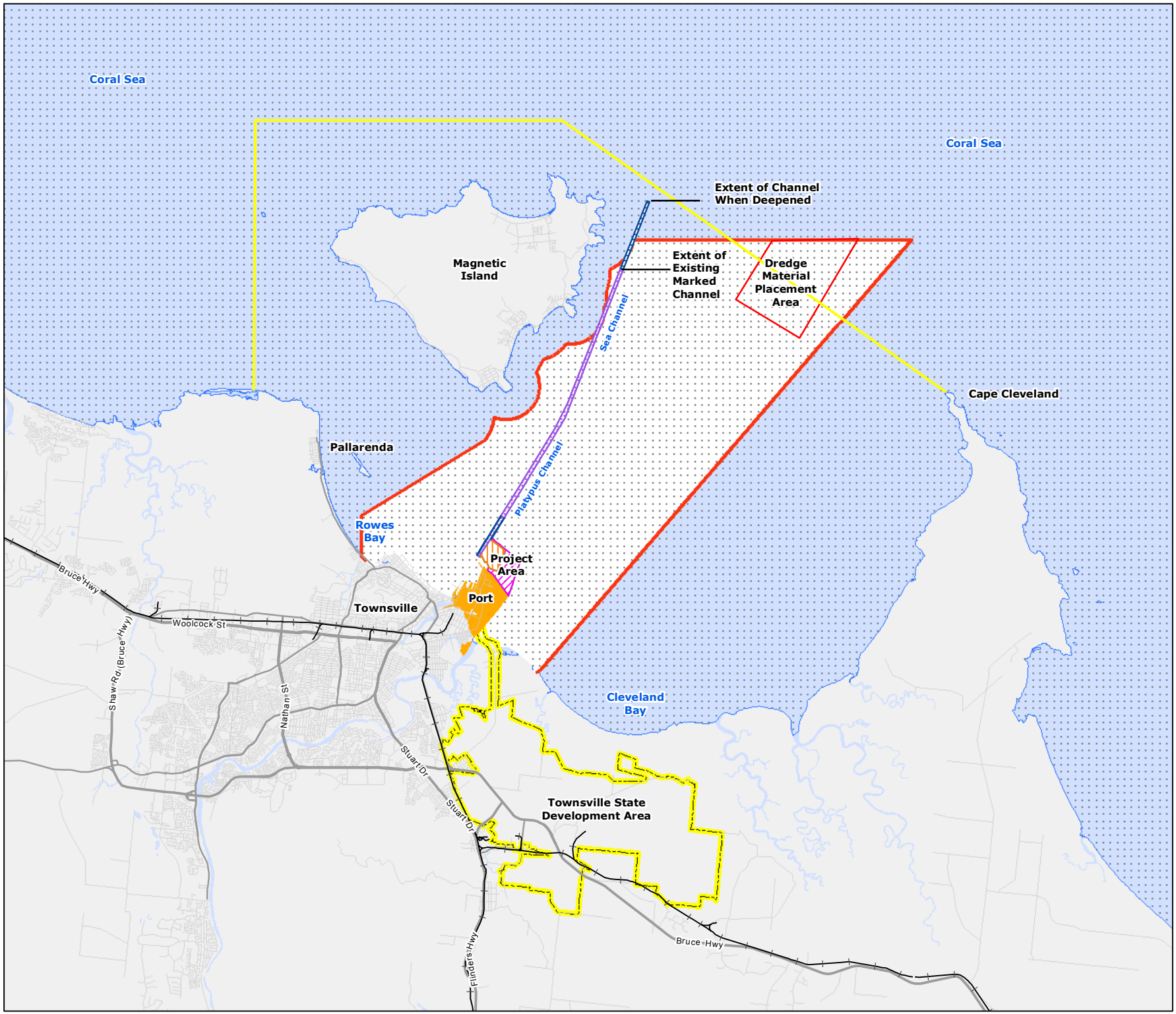
In summary, the PEP comprises:

- a new harbour (the outer harbour) enclosed within a new breakwater (north-eastern breakwater) and new reclamation area to the north-east of the existing port area
- deepening of the existing channels, together with minor widening near the harbour entrance and extension at the seaward end of the existing Sea Channel by approximately 2.7 km.

(C2.3)1.5 Site Location

The Port of Townsville is located in Cleveland Bay adjacent to the city of Townsville. The new outer harbour is seaward of the eastern breakwater and inner harbour as shown in Figure C.2.3.1. The existing Platypus and Sea channels will be deepened in two stages which will result in the lengthening of the Sea Channel east of Magnetic Island.

The construction works and infrastructure developed for the PEP will be in the existing port limits, the designated water areas that navigation falls under the control of the Regional Harbour Master (RHM).



PORT EXPANSION PROJECT EIS

Locality Plan of PEP

Figure C.2.3.1

Legend

- Railway Line
- Highways
- Main Roads
- Minor Roads
- Local Roads
- Port Limits
- Channel to be Dredged
- Existing Port Land
- Existing Channel to be Deepened
- Harbour Basin
- Reclamation Area
- Townsville State Development Area
- Dredge Material Placement Area
- Great Barrier Reef Marine Park Boundary
- GBRWHA/National Heritage Place

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Scale: 1:200,000 (when printed at A4)

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Kilometres

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(C2.3)1.6 Marine Construction Vessel Use

This section outlines the marine construction vessels and plant expected to be used for the development of the PEP, which will be used for:

- dredging and reclamation works
- construction of marine infrastructure.

A summary of the likely range and number of marine construction vessels and equipment expected to be deployed during each PEP stage of development is given in Table 1 through to Table 7. The dredging and marine infrastructure vessels are presented separately for each stage, noting that there is no dredging activity during Stage D of construction. The equipment is based on the adopted dredging and reclamation strategies discussed in Chapter A3.

Figure C.2.3.2 Typical trailer suction hopper dredge (sediment is drawn in by the draghead and placed into the hopper in the vessel hull. The vessel is self-propelled and discharges the dredged material at the DMPA through bottom discharge gates)

Figure C.2.3.3 Typical cutter suction dredger (rotating cutter head loosens material which is drawn up a pipe located as slurry. The slurry is pumped through floating/submerged pipeline to the placement area. The dredger is manoeuvred using the spud piles at the bow and an anchor and wire system from the stern).

Figure C.2.3.4 Typical backhoe dredge (mechanically excavates material using a bucket at the end of the excavator arm and places it in a self-propelled hopper barges which are moored alongside for transport of the dredged material to the DMPA. The dredger is anchored using spud piles and manoeuvred by a tug).

Table 1 Typical vessels and equipment for dredging – Stage A

Primary	Secondary	Construction Activity	Location	Indicative Duration on Site[#] (months)
1 x Small TSHD	None	Dredge soft marine sediments	Outer harbour basin and relocate to DMPA.	4
1 x Large mechanical dredge (BHD or grab dredge)	3 x Self-propelled hopper barges.	Dredge soft marine sediments	Outer harbour basin and reclamation footprint, relocate to DMPA.	6
		Widening of Platypus Channel near outer harbour	Platypus Channel (Ch1,850-2,750), relocate to DMPA.	4
1 x Small/medium CSD	Pipelines and booster station.	Dredge basin areas	Outer harbour basin	10
1 x Medium-large TSHD	CSD or mechanical dredge and hopper barges if very stiff/hard material present.	Stage 1 deepening of Platypus and Sea channels.	Platypus and Sea channels and relocate to DMPA.	4
Ancillary Vessels				
1 x Survey craft	None	Hydrographic survey	Dredging areas and offshore DMPA	36
1 x Small tug	None	Support for mechanical dredge, hopper barges and CSD.	Dredging areas	36
1 (or 2) x Work boat	None	Support for all craft	Dredging areas	36

[#] includes period of time while mobilising and de-mobilising

Table 2 Typical vessels and floating plant for marine infrastructure construction – Stage A

Vessels and Floating Plant	Construction Activity	Location	Indicative Duration on Site[#] (months)
1 x Pile driving barge	Driving steel tubular piles for wharf structures.	Berth 14 and Berth 15 wharf areas. New markers at the end of Sea Channel.	9
1 x Dumb barge	Delivery of piles from land and general wharf construction support.	Berth 14 and Berth 15 wharf areas.	15
2 x Transport barges (if western breakwater is required)	Delivery of material for western breakwater	Transport material from Eastern Reclamation Area to western breakwater location.	12
Ancillary Vessels			
1 x Small tug	Support for pile driving barge and floating crane.	Berth 14 and Berth 15 wharf areas.	15
2 x Work boats	Support for pile driving barge and floating crane and diving operations.	Berth 14 and Berth 15 wharf areas.	15
2 x Tugs (if western breakwater is required)	To manoeuvre transport barges.	Transport material from Eastern Reclamation Area to western breakwater location.	12
1 x Work boat (if western breakwater is required)	Support for western breakwater construction.	Western breakwater	12
1 x Survey craft (if western breakwater is required)	Hydrographic survey	Western breakwater	12

[#] includes period of time while mobilising and de-mobilising

Table 3 Typical vessels and equipment for dredging – Stage B

Primary	Secondary	Construction Activity	Location	Indicative Duration on Site[#] (months)
1 x Small TSHD	None	Dredge soft marine sediments	Outer harbour basin and relocate to DMPA	1
1 x Large mechanical dredge (BHD or grab dredge)	2 x Self-propelled hopper barges	Dredge soft marine sediments	Outer harbour basin and relocate to DMPA	1
1 x Small/medium CSD	Pipelines and booster station	Dredge basin areas	Outer harbour basin	6
Ancillary Vessels				
1 x Survey craft	None	Hydrographic survey	Outer harbour basin and offshore DMPA	8
1 x Small tug	None	Support for mechanical dredge, hopper barges, CSD	Outer harbour basin	8
1 (or 2) x Work boat	None	Support for all craft	Outer harbour basin	8

[#] includes period of time while mobilising and de-mobilising

Table 4 Typical vessels and floating plant for marine infrastructure construction – Stage B

Vessels and Floating Plant	Construction Activity	Location	Indicative Duration on Site[#] (months)
1 x Pile driving barge	Driving steel tubular piles for wharf structure.	Berth 16 Wharf area	5
1 x Dumb barge	Delivery of piles from land and general wharf construction support.	Berth 16 Wharf area	9
Ancillary Vessels			
1 x Small tug	Support for pile driving barge and floating crane.	Berth 16 Wharf area	9
2 x Work boats	Support for pile driving barge and floating crane and diving operations.	Berth 16 Wharf area	9

[#] includes period of time while mobilising and de-mobilising

Table 5 Typical vessels and equipment for dredging – Stage C

Primary	Secondary	Construction Activity	Location	Indicative Duration on Site[#] (months)
1 x Small TSHD	None	Dredge soft marine sediments	Outer harbour basin and relocate to DMPA.	1
1 x Large mechanical dredge (BHD or grab dredge)	3 x Self-propelled hopper barges	Dredge soft marine sediments	Outer harbour basin and reclamation footprint and relocate to DMPA.	1
1 x Small/medium CSD	Pipelines and booster station	Dredge basin areas	Outer harbour basin	12
1 x Medium-large TSHD	CSD or mechanical dredge and hopper barges if very stiff/hard material present	Stage 2 deepening of Platypus and Sea channels	Platypus and Sea channels and relocate to DMPA	4
Ancillary Vessels				
1 x Survey craft	None	Hydrographic survey	Dredging areas and offshore DMPA	12
1 x Small tug	None	Support for mechanical dredge, hopper barges, CSD	Dredging areas	12
1 (or 2) x Work boat	None	Support for all craft	Dredging areas	12

[#] includes period of time while mobilising and de-mobilising

Table 6 Typical vessels and floating plant for marine infrastructure construction – Stage C

Vessels and Floating Plant	Construction Activity	Location	Indicative Duration on Site[#] (months)
1 x Pile driving barge	Driving steel tubular piles for wharf structures.	Berth 17 wharf area. New markers at end of Sea Channel.	5
1 x Dumb barge	Delivery of piles from land and general wharf construction support.	Berth 17 wharf area	9
Ancillary Vessels			

Vessels and Floating Plant	Construction Activity	Location	Indicative Duration on Site# (months)
1 x Small tug	Support for pile driving barge and floating crane.	Berth 17 wharf area.	9
2 x Work boats	Support for pile driving barge and floating crane and diving operations.	Berth 17 wharf area.	9

includes period of time while mobilising and de-mobilising

Table 7 Typical vessels and floating plant for marine infrastructure construction – Stage D

Vessels and Floating Plant	Construction Activity	Location	Indicative Duration on Site# (months)
1 x Pile driving barge	Driving steel tubular piles for wharf structures.	Berth 18 and Berth 19 wharf areas. New markers at end of Sea Channel.	9
1 x Dumb barge	Delivery of piles from land and general wharf construction support.	Berth 18 and Berth 19 wharf areas.	15
Ancillary Vessels			
1 x Small tug	Support for pile driving barge and floating crane.	Berth 18 and Berth 19 wharf areas.	15
2 x Work boats	Support for pile driving barge and floating crane and diving operations.	Berth 18 and Berth 19 wharf areas.	15

includes period of time while mobilising and de-mobilising

(C2.3)1.7 Navigation Measures for Construction

Vessel traffic and marine based activities will be generated during dredging and marine construction works (refer Chapter A3) requiring measures to manage risk, maintain safe navigation, support efficient port operations and reduce disruption to other vessel traffic. The PEP EIS proposes that navigation measures are managed and implemented in accordance with the VTMPC appropriate to the works undertaken and methodology. This section identifies the potential vessel interactions that will result from the marine construction and dredging works and management measures to mitigate potential impacts.

(C2.3)1.7.1 Potential Vessel Interactions

The construction phases of the PEP will generate vessel traffic and marine based activities. These have the potential to impact on vessel safety and obstruct the navigation of other traffic such as shipping, commercial vessels, tugs, pilot boats, military vessels or recreation traffic. Significant construction traffic will be generated, particularly by dredging works in the channel and dredging in the outer harbour basin that involves offshore disposal.

Potential vessel interactions related to the construction activities will occur in existing navigation areas in the port, new areas developed by the Project, or areas under development at the time of the works. The main potential vessel interactions that will derive from the PEP construction phases have been identified as follows:

- Dredging in the Platypus and Sea channels which cannot take place concurrently with shipping movements in the channel system.
- Dredging works for the development of new basin areas and deepening of existing areas in the outer harbour.
- Transporting dredged material by trailer suction hopper dredger (TSHD) or hopper barges from dredging locations in the outer harbour and Platypus and Sea channels to the Dredge Materials Placement Area and returning to the dredging locations.
- Dredge pipelines and anchor wires used for cutter suction dredgers will constrain navigation paths.

- Floating piling rigs for construction of wharves and channel markers.
- Barging of rock material from land to the western breakwater if it is required.
- Work boats transporting personnel, vessel supplies and materials.
- Bunkering and re-fuelling of dredging and construction vessels.
- Tugs used for manoeuvring dredging plant and barges.
- Hydrographic survey of navigation areas using survey craft.
- Mooring of vessels at existing port facilities, temporary structures or anchorage areas.

When the new outer harbour basin areas are developed they can be demarcated for restricted use by authorised construction vessels only, thereby reducing the potential interacts with other vessels in these areas.

(C2.3)1.7.2 Vessel Management Measures

The key management measures identified in Table 8 are in response to the expected impacts of construction on vessel operations and navigation. These measures would be implemented through the VTMPC by POTL and contractors in consultation with MSQ and the RHM. These are in addition to the measures included in the Maritime Operations Management Plan that forms Section C2.4.

Table 8 Vessel management measures for marine construction

Management Measure	Description
Safe vessel navigation	▪ Protection of shipping and port operations from construction vessels. ▪ Construction vessels, dredge vessels, floating plant, floating equipment and support craft to be suitable for undertaking marine construction in a safe manner. ▪ Manage risk for recreational boating and commercial craft using Cleveland Bay. ▪ Dredging to achieve design depths confirmed by bathymetric survey to MSQ standards. ▪ Vessels to be crewed by suitably qualified mariners.
Vessel traffic management	▪ Prevent disruption to shipping movements. ▪ Scheduling of channel dredging works with ship movements.
Mooring	▪ Provide secure mooring of construction vessels, dredge vessels, floating plant and floating equipment. ▪ Temporary mooring structures to be approved by relevant authorities. ▪ Mooring procedures for inclement weather and cyclones.
Aids to navigation	▪ Lighting on new breakwaters and edge structures to make extents visible at night. ▪ Temporary aids to navigation to support safe navigation during construction areas and if necessary to demarcate vessel exclusion areas.
Pilotage resources during construction	▪ Plan resourcing to address construction stage requirements. ▪ Programme for obtaining pilot exemption certificates.
Port security	▪ Adopt the Maritime Security Plan for Port of Townsville during construction stages. ▪ Develop appropriate communications procedures and protocols.
Bunkering and refuelling	▪ Ensure that refuelling is undertaken safely and measures are in place to manage risk of spills.
Emergency management	▪ Review port wide emergency management procedures for cyclones and extreme weather events to cater for construction vessels, dredge vessels, floating plant, floating equipment and support craft. ▪ Review emergency response equipment and personnel resources during marine construction stages. ▪ Development of contractor emergency management procedures for cyclones and extreme weather events.
Recreational boating and	▪ Lighting on breakwaters and seawalls to show extents for visibility by

Management Measure	Description
commercial craft	recreational craft at night. ▪ Vessel Traffic Management Plans at each stage of development and are required to address recreational boating safety, particular consideration to be given to: ▪ temporary aids to navigation for construction areas ▪ notices to mariners ▪ consultation with the recreational boating community.

(C2.3)1.8 Townsville Port Procedures

MSQ publishes port procedures (Port Procedures and Information for Shipping – Port of Townsville) which are designed to complement the requirements of the above legislation, regulations and codes and also the procedures of:

- Port of Townsville Limited
- Townsville City Council
- Maritime Safety Queensland
- Australian Maritime Safety Authority
- Australian Customs Service
- Department of Agriculture, Fisheries and Forestry
- Royal Australian Navy
- Biosecurity Queensland

The mandatory port procedures ensure marine safety as they relate to ship movements in the jurisdiction of the RHM Townsville; they are regularly reviewed.

The *Transport Operations (Marine Safety) Act 1994* enables the RHM to give a general direction to ship owners, ship masters, ships, other persons or matters for purposes of ensuring safety and the effectiveness and efficiency of the Queensland maritime industry.

(C2.3)1.9 MSQ Guidelines for Major Development Proposals

To assist proponents of major development proposals in identifying maritime related impacts and to define mitigation strategies, MSQ has developed guidelines for major development proposals (DTMR, 2010). The guidelines specify the minimum information required by MSQ to evaluate significant development proposals. The preferred format for presentation of this information is through the development of management plans for:

- vessel traffic management
- aids to navigation
- ship-sourced pollution prevention.

(C2.3)1.10 Strategies and Management Measures

(C2.3)1.10.1 Responsibilities

There are a number of agencies and bodies with authority and responsibility for these matters.

(C2.3)1.10.1.1 Regulatory Bodies

The VTMPC complements the material presented in the main body of the EIS for the PEP as it brings together activity specific management and mitigation measures under consideration, in particular to support safe, efficient and effective vessel operations in the port during the construction stages of the PEP.

The VTMPC will be finalised at the conclusion of the EIS process, taking into consideration comments on the EIS and detailed during the PEP design. This VTMPC will provide the framework for progressing the management of construction vessel operations in the port.

Once the VTMPC is finalised, it will be the primary responsibility of POTL to implement the plan through the appointed contractors.

Each contract involving construction vessels and equipment to construct marine works (dredging and marine infrastructure) will require application of the VTMPC. This will be prepared by the managing contractor to suit the construction methodology, vessels and equipment in operational traffic at the time.

(C2.3)1.10.1.2 POTL

As the proponent of the PEP EIS, POTL is responsible for ensuring the PEP is designed and developed. Consequently, actions would be managed to support vessel operations in ways that are safe and meet the requirements of applicable legislation, that aim for best practice management of vessel traffic (related to the PEP construction) and aids in achieving the requirements of both POTL approval and the jurisdiction of relevant authorities.

POTL will oversee the tendering process and construction of the marine works and will generally be responsible for:

- managing contractors for works involving vessels, dredging equipment and marine plant prepare VTMPCs for submission to MSQ and to obtain approved plans prior to commencing construction activities
- relevant supervisory and management staff of POTL and contractors are aware of and understand their responsibilities under the VTMPC
- periodic reviews of performance against plan are conducted
- best practice vessel traffic management procedures are developed and implemented
- vessel traffic management performance and any major incidents that may have a significant impact on vessel safety and navigation are reported to relevant authorities
- appropriate and adequate resources are allocated to implement and monitor the VTMPC
- each appointed contractor has emergency procedures and equipment in place to respond to an emergency vessel traffic incident
- compliance with regulatory approval conditions.

(C2.3)1.10.2 VTMPC Implementation

(C2.3)1.10.2.1 Preparation and Approvals

Contractors involved with dredging or construction of infrastructure (using vessels, dredging or marine plant), as a part of their contracted work package, may need to prepare specific procedures for each stage to meet the VTMPC and be in accordance with the requirements of the Principal's VTMPC, as well as any State and Commonwealth Government approval permits and conditions.

In addition to the legislative and statutory requirements, contractors shall also have regard for the operational requirements of POTL and the RHM in terms of vessel movements and maritime safety.

(C2.3)1.10.2.2 Operations and Monitoring

Each contractor involved with dredging or construction of infrastructure, using vessels or marine plant will be responsible for:

- liaising with vessel crews to implement and monitor the contract specific VTMPC
- complying with provisions of the contract specific VTMPC as applicable
- regularly inspecting and monitoring activities for adherence to proper marine safety measures.

This will include routine inspection of the works, reports and correspondence relating to vessel safety management issues.

(C2.3)1.10.2.3 Reporting

Each managing contractor involved with dredging or construction of infrastructure will be responsible for establishing a VTMPC file that contains documentation pertaining to vessel traffic management and in particular the latest approved version of the VTMPC. The file shall also include monitoring data and information in relation to management of the VTMPC.

(C2.3)1.10.2.4 Review, Update and Improvement of Contract Specific VTMPC

A copy of the latest approved VTMPC (contract specific) will be kept on-site for the duration of the works and be easily accessible.

During the works, POTL Project Manager would also hold a copy of the latest approved version of the Principal and contractor-specific VTMPC. The VTMPC (contractor) will be regularly reviewed in relation to conditions encountered and updated as appropriate.

(C2.3)1.10.3 VMPC Components and Structure

Table 9 provides a summary of the components of the VTMPC.

Table 9 VTMPC components

Reference	Management Issue	Scope
Section (C2.3)1.10.4	VTMPC (Principal) - This document	Outlines the VTMPC, its requirements for each development stage of the PEP to be managed and issued by POTL.
Section (C2.3)1.10.5	VTMPC (Contractor)	Specifies the VTMPC requirements and any procedures under the contract Including the managing contract involving dredgers, construction vessels or marine plant to be implemented by the contractor.

(C2.3)1.10.4 Vessel Traffic Management Plan – Construction (Principal)

An overall VTMPC for each PEP development stage (A to D) will serve as a framework for contractors to prepare VTMPC details specific to its construction vessels and operations. As the principal, POTL will finalise the overall VTMPC in consultation with MSQ and the RHM to suit the marine construction works, contracting strategy and operating conditions at the time.

POTL will be required to monitor and update the VTMPC to reflect any changes to planned operations or construction methodology or the *Port Procedures and Information for Shipping*. For changes sought by POTL, the RHM shall be consulted in the preparation of each update.

Topic	Vessel Traffic Management Plan – Construction (Principal) (for all stages of construction)
Management Objective	Prepare, maintain, implement and monitor a VTMPC for the PEP.
Applicability	It provides a framework for the development and management of contractor VTMPCs for each PEP development stage.
Performance Criteria	▪ Safe vessel operations. ▪ Reduce risk and disruption to shipping, commercial vessels and recreational boating ▪ Reduce risk to infrastructure and aids to navigation
Implementation Strategy	▪ Determine the allowable extent, type and location of temporary structures. ▪ Specify requirements for temporary aids to navigation and demarcation of construction areas. ▪ Outline consultation requirements with regulatory authorities, MSQ and RHM. ▪ Outline consultation requirements with regard to recreational boating and commercial vessels. ▪ Specify hydrographic survey requirements (frequency, type and class) for monitoring depth in navigation areas during construction. ▪ Specify methods for dealing with spilt material or obstructions in navigation waters. ▪ Identify resourcing levels for pilotage and pilot exemption certificates for the construction. ▪ Identify management measures for interfaces between contractors if work is to be

Topic	Vessel Traffic Management Plan – Construction (Principal) (for all stages of construction)
	undertaken simultaneously under separate contracts. ▪ Specify limitations to vessel operations and refuelling. ▪ Determine the frequency and details of vessel movement schedules to be submitted by contractors. ▪ Detail emergency planning requirements. ▪ Detail port security requirements. ▪ Specify requirements for management of safety and navigation.
Monitoring	▪ POTL in conjunction with RHM will oversee the development of contractor VTMPCs. ▪ POTL monitors the contractor's performance against VTMPC (Contractor).
Auditing	▪ POTL will oversee construction activities to monitor contractor's performance against VTMPC. ▪ MSQ Vessel Traffic Services to record non-conformances and incidents from construction vessel operations.
Reporting	Contractor is to develop VTMPC (Contractor) in line with VTMPC (Principal) and report back on performance.
Corrective Action	Revise the VTMPC to reflect any deficiencies identified during construction activities due to: ▪ changes to planned operations or construction methodology ▪ changes to the *Port Procedures and Information for Shipping* Should any changes be required to the overall VTMPC, these are to be reflected in the contractor VTMPC.
Responsibility	POTL with ongoing consultation with contractors, MSQ and RHM.

(C2.3)1.10.5 Vessel Traffic Management Plan – Construction (Contractor)

For construction work involving the use of dredging or marine construction vessels and floating plant, the managing contractor shall prepare and implement its plan in accordance with the requirements of the VTMPC discussed in Section (C2.3)1.10.4. The requirements of the contractor VTMPC will be outlined in the VTMPC (Principal). The VTMPC does not replace any requirement for any regulatory documentation required by MSQ or the RHM.

During the construction, the contractor shall update parts of the VTMPC to reflect any changes to planned operations, construction methodology or the *Port Procedures and Information for Shipping* and detail the manner in which it will perform any construction works or dredging operations for the PEP.

If changes are sought by the contractor, POTL and the RHM will be consulted in the preparation of each update and once complete the contractor will submit each update to RHM for consent.

The contractor, where indicated, is to consult with and incorporate the requirements of the RHM and POTL into the VTMPC.

The contractor will be responsible for identifying and obtaining approvals required under Commonwealth and State legislation to undertake construction works and dredging operations.

Topic	Vessel Traffic Management Plan – Construction (Contractor)
Management Objective	Prepare, maintain, implement and monitor VTMPC for construction works and dredging operations.
Applicability	Contractors undertaking marine operations involving dredgers, construction vessels and floating plant.
Performance Criteria	▪ Safe vessel operations. ▪ Reduce risk and disruption to shipping, commercial vessels and recreational boating. ▪ Reduce risk to infrastructure and aids to navigation. ▪ Reduce risk of potential impacts from marine construction operations.
Implementation Strategy	In preparing a VTMPC the contractor shall: ▪ Comply with the requirements of the VTMPC (Principal).

Topic	Vessel Traffic Management Plan – Construction (Contractor)
	▪ Consult with POTL, RHM, MSQ and other relevant regulatory authorities. ▪ Consider the requirements of *Port Procedures and Information for Shipping – Port of Townsville*. The VTMPC shall address the following: 1) Protection of shipping and port operations 2) Protection of existing port and other structures and assets including existing navigation aids/markers 3) The management of recreational craft 4) Pilotage requirements and programme for obtain pilotage exemption certificates as appropriate 5) Workplace health and safety requirements 6) Induction and training procedures 7) Site security and compliance with the Maritime Security Plan for Port of Townsville 8) Communication protocols and procedures with POTL, RHM, Vessel Traffic Services and other parties 9) Temporary marine structures and aids to navigation 10) Bunkering and refuelling procedures and maintenance of construction vessels 11) Emergency procedures (including cyclone contingency plans). Details are to be provided in the VTMPC of construction vessels including: 1) The vessel name, draft, tonnage, pump power, dimensions, lifting capacity etc. 2) Valid Certificate of Survey or a valid permit issued by MSQ pursuant to the *Transport Operations (Maritime Safety) Act 1994*. 3) Description of how each vessel will be crewed and how it is to be used for the Project. Details are to be provided in the VTMPC of temporary works (including aids to navigation), moorings and existing marine facilities that will be used.
Monitoring	The contractor shall consult with the RHM and submit specific Weekly Works Schedules for consent. The Weekly Work Schedules to be approved by the RHM, they shall specifically describe the following: 1) The general location, activities and program for the works (i.e. the program indicates expected routes) 2) The number and type of construction vessels greater than 35m LOA to be deployed 3) An estimate of the number and type of construction vessels less than 35m LOA to be deployed for dredging and construction operations 4) Consideration of shipping schedules, and port operating hours to ensure that impacts on peak operational periods are reduced 5) Applicable weather and/or night time constraints 6) Additional communication protocols and procedures 7) Development of protocols for communication between parties relevant to the dredging and construction operations.
Auditing	▪ Contractor is to monitor and audit the progress of the VTMPC as part of the quality assurance plan including for those items required by VTMPC (Principal) ▪ POTL shall monitor Contractor's performance against the VTMPC in consultation with MSQ and RHM.
Reporting	▪ Contractor to report back on VTMPC at construction works schedule meetings including for those items required by VTMPC (Principal). ▪ MSQ Vessel Traffic Services to record non-conformances and incidents from construction vessel operations.
Corrective Action	Contractor to revise the VTMPC to reflect any deficiencies identified during construction activities due to: ▪ changes to planned operations or construction methodology ▪ changes to the *Port Procedures and Information for Shipping*

Topic	Vessel Traffic Management Plan – Construction (Contractor)
	If any changes are required to the Contractor's VTMPC, these shall be submitted to POTL and to the RHM for consent.
Responsibility	▪ Contractor to prepare in consultation with POTL, MSQ and RHM. ▪ Contractor to conduct vessel operations in accordance with the approved VTMPC. ▪ POTL to monitor Contractor's performance against VTMPC in consultation with MSQ and RHM.