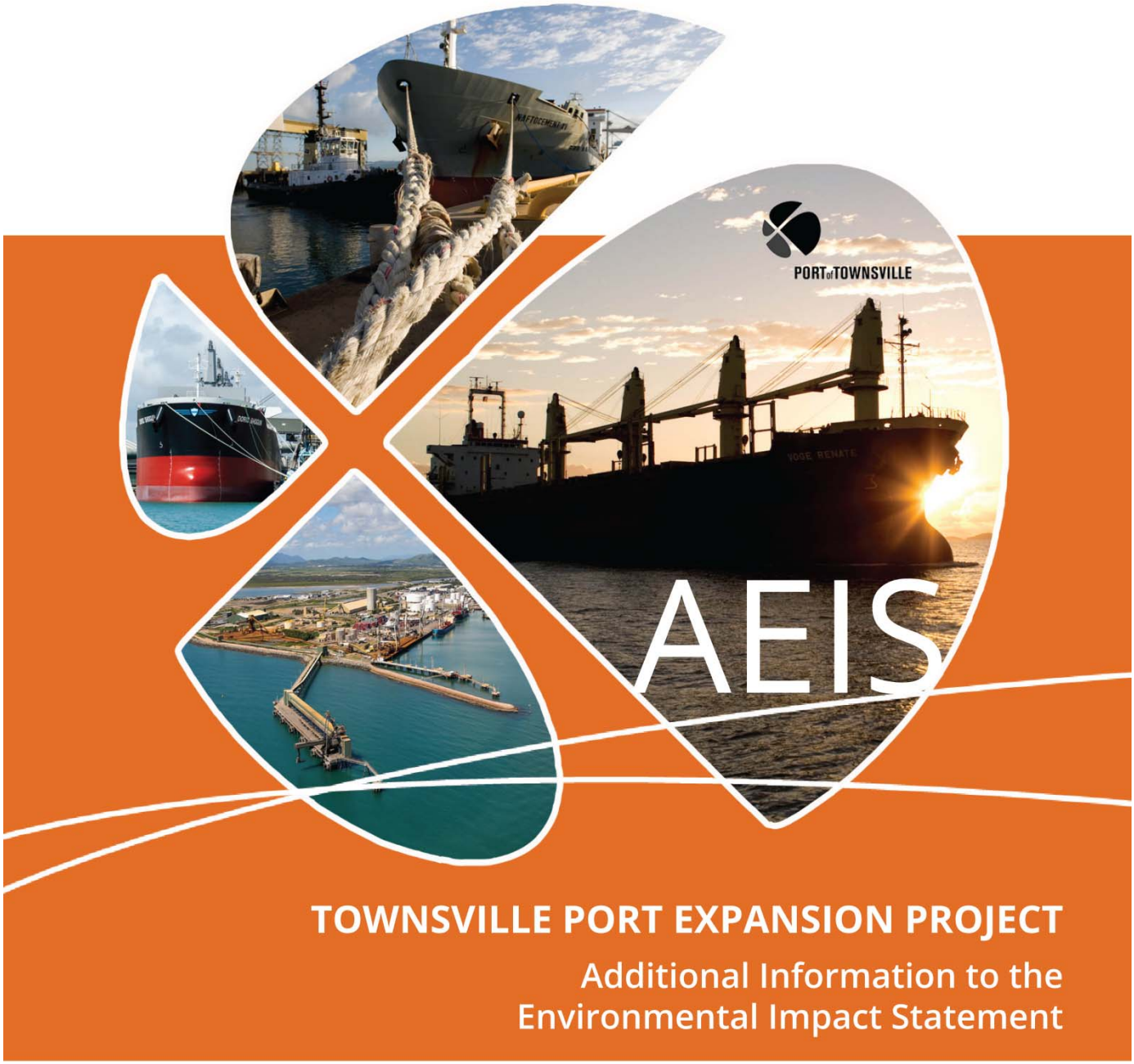


# TOWNSVILLE PORT EXPANSION PROJECT

## Additional Information to the Environmental Impact Statement

TOWNSVILLE PORT EXPANSION PROJECT

**SECTION 20**

**Port Operations**

AECOM BMT WBM

# 20.0 Port Operations

## 20.1 Introduction

The impacts of the Port Expansion Project (PEP) on port operations are addressed in Chapter B.18 (Port Operations) of the Environmental Impact Statement (EIS). The PEP is essentially a progressive expansion of the existing Port and its current operations. Operations at the port will be conducted under the existing management framework of Port of Townsville Limited (POTL) and in accordance with the policies and regulation of other relevant regulatory bodies and maritime authorities. Measures to manage any potential impacts on the environment, vessel safety and operational efficiency of the PEP will not involve major changes to existing management measures or POTL or port users.

The progressive development of the PEP will occur in response to trade demand. POTL, as the port authority, will be responsible for the development of the PEP in terms of the dredging and land reclamation activities. On a case by case basis, POTL may also be responsible for the development of wharves and associated port infrastructure. The development of any new cargo handling facilities will most likely be the responsibility of port tenants or cargo owners. In either case, the proponents of those new facilities will be responsible for any additional approvals related to those facilities at the time of their proposal. POTL will continue to manage the operations of port users through lease and licence agreements.

This section provides information to address submissions received in response to the PEP EIS, relevant to port operations. More specifically, key matters raised in the submission process include:

- adequacy of shipping forecast data to assess management needs
- management of shipping activities in the Great Barrier Reef Marine Park
- adequacy of navigational hazard management on the rock wall
- inclusion of detail on anchorage requirements and management
- impact to non-PEP vessel movements and interactions
- requirements of the Vessel Traffic Management Plan
- adequacy of spill management measures.

## 20.2 Response to Submissions

### 20.2.1 Adequacy of shipping forecast data to assess management needs

Maritime Safety Queensland (MSQ) submission requested additional shipping forecast data to assess future shipping and traffic management needs and demand for port facilities and suggested that the EIS reference to the *Great Barrier Reef Shipping: Review of Environmental Implications* Report (PGM, 2012) was used as a justification for the projected increase in shipping, despite no demonstrated evidence of increased shipping in recent years.

Chapter B.19 (Economic Environment) of the EIS summarises the need for the PEP based on prepared trade forecasts to the 2039/40 fiscal year. The PEP is planning to enable the timely development of additional infrastructure, in response to trade demand, to ensure sufficient capacity ahead of the expected demand. Forward planning will allow sensible port development over the longer term. Having approvals in place reduces the time from demand identification to infrastructure development. This aims to avoid capacity constraints impacting on trade growth opportunities. As trade throughput increases, the volume of shipping will increase, however, the shipping forecasts also take account of the global trend for the increase in vessel sizes, and as described in Chapter 21.0, the anticipated use of larger ships on the east coast of Australia.

Section B.18.4.3 of the EIS addressed future navigational arrangements. As noted above, POTL are positioning the future port to be able to take advantage of the anticipated increase in vessel size occurring in the global fleet. Changes to the channel configuration and the introduction of larger ships will impact the ship operations and navigation arrangements at the Port of Townsville. Any increase in shipping as a result of the PEP will occur over time as new trades come on line. This increase will be incremental, and as is the case with any operational changes, MSQ will be consulted to ensure the safety of shipping at the Port. For example, if a new trade was to anticipate the use of significantly different or larger vessels, MSQ will be a key part in the detailed development of operating protocols within the Port and the detailed design phase of that trade's infrastructure within the PEP.

Port of Townsville in 1993 had 463 cargo vessel visits and in 2015 had just fewer than 700 cargo vessel visits. This is a similar timescale as proposed in PEP as such there is demonstrated evidence of increased shipping and ship visits on the timescale of this Project.

### 20.2.2 Management of shipping activities in the Great Barrier Reef Marine Park

Queensland Tourism Industry Council's submission raised environmental risks associated with allowing trans-shipping activities in the Great Barrier Reef Marine Park, noting shipping rules and regulations must be effective and

supported by strong enforcement and appropriate penalty regimes. Trans-shipping is not proposed as a part of PEP operations.

One submission raised the need to consider the increased shipping traffic within the World Heritage Area. Management of safety and environmental risks associated with shipping and vessel activity within the Great Barrier Reef Marine Park are controlled by the Australian Maritime Safety Authority (AMSA) and Great Barrier Reef Marine Park Authority. MSQ are responsible for determining permitted shipping activities within the Great Barrier Reef Marine Park compliance monitoring and enforcement of penalties for non-compliance with regards to environmental and safety management.

### 20.2.3 Adequacy of navigation hazard management on the rock wall

The MSQ submission also raised the lighting and illumination of the rock walls for navigational hazard management. Lighting and illumination requirements for the new rock wall, during construction and on completion of the land reclamation, will be determined in consultation with the Regional Harbour Master (RHM) during the detailed design phase of each stage and / or prior to construction. POTL will adhere to the standard safety requirements relevant to lighting and illumination of the rock wall, consistent with safe navigation.

### 20.2.4 Inclusion of detail on anchorage requirements and management

The MSQ submission requested additional information on future anchorage requirements as a result of the PEP and methods to manage any increase in anchorage requirements.

Future anchorage requirements for operations associated with the PEP were investigated as part of the *Preliminary Engineering and Environment Study* (Maunsell AECOM, 2009). Anchorage requirements are not envisaged to significantly increase as a result of the PEP. POTL has no legislatively ability to direct or require anchorage as it lies outside of POTL's jurisdiction. Management of the anchorage area is undertaken by the Regional Harbour Master (RHM) in line with State and Commonwealth requirements.

The MSQ submission also raised the adequacy of monitoring of benthic impacts from anchoring and discharge of pollutants and / or waste materials. The discharge of pollutants and / or waste materials is heavily regulated in Australia, Queensland and the Great Barrier Reef Marine Park. All vessels are required to comply with regulations and AMSA, Great Barrier Reef Marine Park Authority and MSQ have a range of enforcement tools available for compliance monitoring and penalty enforcement relevant to waste management and discharge offenses. As PEP provides additional berthing capacity it will somewhat alleviate the requirement for anchorage and PEP is not expected to require additional anchorage areas beyond the areas currently used by vessels. No additional benthic sampling has been undertaken at the anchorage area.

### 20.2.5 Impact to non-PEP vessel movements and interactions

The MSQ submission raised interactions between the PEP and non-PEP vessel traffic and the impact of movements and access to the shipping channel. More specifically, it was raised regarding channel speed limits and the potential for delays to the Townsville-Magnetic Island ferry and non-PEP vessel access to Ross Creek.

The shipping channel is currently subject to speed limits and it is envisaged these limits will remain in place and extend to the full outer harbour. This is not expected to significantly impact upon smaller commercial or recreational vessels with shallower drafts as there is no requirement for those vessels to remain in the channel and the majority of these vessels already exit the channel at the existing breakwater. The PEP is not anticipated to interfere with this practice. Should the western breakwater be required, a gap has been included in the preliminary design to allow this practice to continue. This will ameliorate any loss in transit time due to speed limits enforced in the channel.

Shipping movements in the channel are not expected to be significantly impacted during construction of the PEP. Dredging activities associated with the PEP construction will be undertaken to minimise interaction and disruption to operational shipping movements within the channel, in accordance with current practices. The channel widening during Stage 1 dredging will have minimal impact to commercial vessel operations. The channel deepening during Stage 3 will require the dredge to operate within the active shipping channel. Priority will be given to commercial vessels at all times. Additional time allowance has been made during the dredge program to ensure that the dredge is not operating in the channel whilst commercial vessels are approaching or sailing in the channel. Appropriate controls, management and regular dialog will be developed in consultation with MSQ and implemented to ensure any shipping / dredging interactions are appropriately managed.

MSQ raised recreational vessel access to boat ramp facilities in Ross Creek. The PEP will not impede recreational vessel access to Ross Creek and as outlined above the proposed gap in any future western breakwater will ensure that any impact of extension to speed limits within the channel are minimised. Details of the western breakwater design will be confirmed during the detailed design phase and in consultation with MSQ to ensure all safety and navigation requirements are adequately met.

The demarcation of the new outer basin area and the impact to the boating community was also raised. The new outer basin area will be marked with public access restricted during construction activities. Upon completion, the

new outer basin area will be a port operational area and managed similarly to the current Inner Harbour with strict limitations in place for water restricted zones, navigation safety and infrastructure protection.

### 20.2.6 Requirements of the Vessel Traffic Management Plan

MSQ requested additional information on performance objectives relevant to ensuring safe navigation of vessels and reporting of vessel interactions. A submission was also received regarding the likelihood of accidents due to increased shipping traffic. A Vessel Traffic Management Plan is provided in Part C of the EIS. This plan will act as a template for individual contractors to develop their own Vessel Traffic Management Plans specific to their operations. All Vessel Traffic Management Plans will be developed in accordance with the *Port Procedures, Information for Shipping and Standard for Marine Construction Activities* (draft), and will be submitted to POTL and RHM for approval. Vessel Traffic Management Plans will outline performance objectives as well as navigation hazard management and reporting requirements.

The Maritime Operations Management Plan provided in Part C of this AEIS will also be updated in accordance with the Port Procedures, *Information for Shipping and Standard for Marine Construction Activities* (draft), and subject to any amendments to these documents. The Maritime Operations Management Plan will be updated prior to each stage of the PEP and will be submitted to the RHM for approval.

### 20.2.7 Adequacy of spill management measures

Two submissions were received regarding the adequacy of the current spill management measures. The PEP will rely on the existing POTL spill management measures which will be reviewed independently of the PEP. They will be applied to the construction and operation of the PEP. Spill management measures will also be reviewed with MSQ and RHM prior to Stages 1, 2 and 3 where new berths are developed, to ensure their adequacy. This review will include first strike response measures.

MSQ raised the management of ballast water. Ballast water discharge from vessels is managed by individual ship operators under the control of the Commonwealth Department of Agriculture and Water Resources. All international vessels operating in Australian waters, including the Great Barrier Reef Marine Park, must manage their ballast water in accordance with Commonwealth requirements. These vessels must exchange ballast water for clean water from the deep ocean prior to entering Australian waters. All discharge activities at berth must be undertaken in accordance with State and Commonwealth requirements and regulations.

## 20.3 Revised Environmental Impact Assessment

### 20.3.1 Legislation and policy

Legislation and policy changes that have occurred since the development of the EIS are identified in Section 1.0 of the AEIS. The legislative and policy changes did not impact on the assessment of port operations presented in the EIS.

### 20.3.2 Design refinement

The project design has been revised and modified to further reduce potential impact to the marine environment. This revision has resulted in updated staging for the PEP, impacting the timing and duration of channel dredging and berth construction.

The western breakwater option and creation of a gap to facilitate non-PEP vessel movement out of the channel will be assessed and confirmed as part of the detailed design phase.

### 20.3.3 Supporting studies

No additional studies were required to assess the revised design and adequately address comments received from public submissions.

### 20.3.4 Revised assessment

#### 20.3.4.1 Impact assessment

The design refinement modifies the timing and duration of channel dredging. Impacts associated with this refinement are expected to be similar to that identified in Chapter B.18 (Port Operations) of the EIS. Non-PEP vessels will still be able to exit the channel at the end of the existing breakwater and the western breakwater option can retain this gap to facilitate movement if required. Dredging activities will be undertaken to minimise disruption to shipping movements in accordance with current practice.

#### 20.3.4.2 Mitigation measures

Section B.18.5 of the EIS identifies mitigation measures to reduce the impact the Project has on port operations. The mitigation identified in the EIS remains current for the revised design. Mitigation measures will be outlined and implemented through the following management plans:

- Construction Environmental Management Plan (Appendix B2 of the AEIS)
- Operational Environmental Management Plan (Appendix B3 of the AEIS)
- Vessel Traffic Management Plan (Chapter C2.3 of the EIS)
- Maritime Operations Management Plan (Chapter C2.4 of the EIS).

### 20.3.5 Summary

Section B.18.4 of the EIS provides an assessment of potential impacts and proposed mitigation measures in regards to port operations. Management plans identified in Section 20.3.4.2 above will be updated were required prior to construction and operation of the PEP.

## 20.4 Conclusion

The incremental development of the PEP over several decades is not expected to significantly impact upon port operations and with the implementation of mitigation measures as described in the Construction Environmental Management Plan (Appendix B2), Operational Environmental Management Plan (Appendix B3), Vessel Traffic Management Plan and the Maritime Operations Management Plan the overall impact to port operations is considered to remain low.