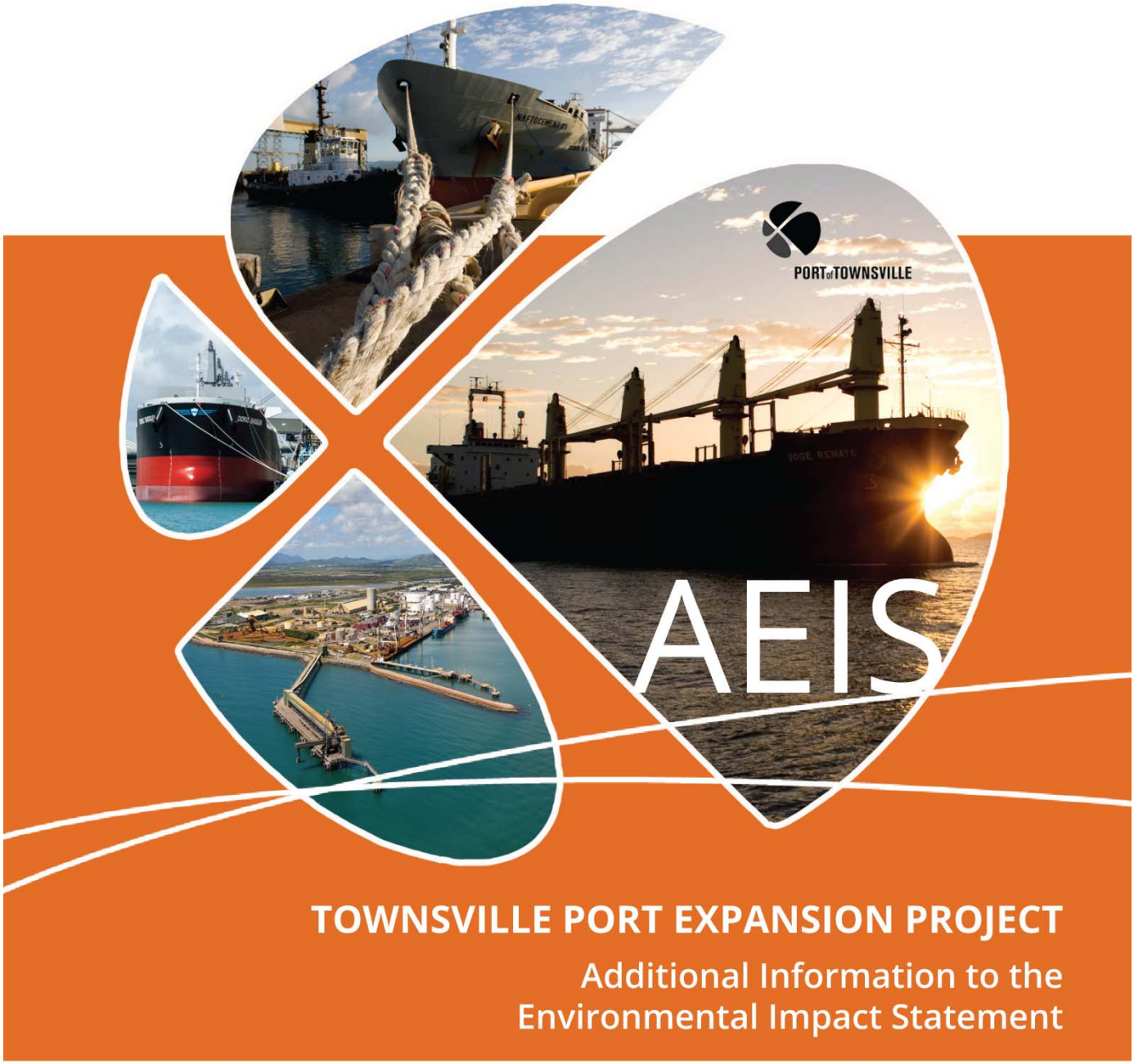

TOWNSVILLE PORT EXPANSION PROJECT

Additional Information to the Environmental Impact Statement

TOWNSVILLE PORT EXPANSION PROJECT

SECTION 14

Waste

AECOM BMT WBM

14.0 Waste

14.1 Introduction

Waste management associated with the Port Expansion Project (PEP) is described in Chapter B.12 (Waste) of the Environmental Impact Statement (EIS). The construction and operation of the PEP will generate a variety of waste that requires appropriate storage, handling and disposal management to reduce impact to the environment, community and port users. The Port of Townsville Limited (POTL) manages waste in the common areas of the Port under its existing Environmental Management System. Existing and future port tenants are required to implement waste measures prior to commencing individual operations.

This section provides information to address submissions received in response to the EIS, relevant to waste and the implications of the revised design on these values. Key matters raised from the submission process include:

- clarification about the role of Townsville City Council's waste management network in managing saline discharges and waste from vessels
- a request for more detailed information on hazardous materials proposed to be stored on site.

14.2 Response to Submissions

14.2.1 The role of Townsville City Council's waste management network in managing saline discharges and waste from vessels

Additional information was requested by two submissions regarding the waste management network. Measures to manage waste generated by the PEP and port tenants are described in Section B.12.5.2 of the EIS and further discussed below.

Townsville City Council requested further information regarding wastes discharged into the sewerage network, including saline discharges. The type of wastewater discharge proposed as part of the PEP construction and operation is comparable to other POTL reclamation projects such as the Townsville Marine Precinct and is not proposed to include significant volumes of saline discharges.

Wastewater discharge generated by construction and operational activities associated with the PEP will be received within Townsville City Council's sewerage infrastructure and treated at the Cleveland Bay Wastewater Treatment Facility, in accordance with the infrastructure planning studies carried out by Townsville City Council, and existing Port practices.

Occasionally military vessels that visit Townsville have saline wastewater systems. These vessels are required to discharge saline wastewater to the Townsville City Council sewerage network while berthing at the Port. To minimise the impacts of these discharges on the Cleveland Bay Wastewater Treatment Plant, the effluent is diluted where possible by mixing with other flows.

Ballast water discharge from vessels is managed by individual ship operators under the controls 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.

The Great Barrier Reef Marine Park Authority requested consideration of shore-based reception facilities for ship generated waste. POTL is responsible for the management of waste generated by construction and operational activities under its direct control. Individual port tenants are responsible for negotiating individual trade waste agreements with licenced contractors to remove site generated wastes (excluding sewage) and for arranging the removal of regulated waste to a licensed reception facility as well as adhering to the relevant regulatory requirements regarding the disposal of quarantine wastes. Quarantine wastes from vessels must be removed and treated in line with strict national guidelines.

14.2.2 Detailed information on hazardous materials proposed to be stored on site

The Department of Environment and Heritage Protection requested detailed information on the hazardous materials to be stored and / or used on the PEP including environmental toxicity data and biodegradability.

The types of hazardous materials that will be used during the construction of the PEP will be typical of a large infrastructure project. Whilst detailed information on hazardous materials is not available at the current design stage, all hazardous materials to be used during construction of the PEP will be identified prior to commencement, and appropriate storage facilities will be established (where required) in accordance with regulatory requirements.

All hazardous materials used or stored on site under POTL control will be added to the hazardous materials register along with appropriate safety data sheets. Hazardous materials will be handled, used and disposed of in accordance with the safety data sheets and only handled by personnel trained in their appropriate use and handling.

Tenants and port operations outside the control of POTL will be responsible for the safe handling and storage of hazardous materials in their leased areas, in accordance with POTL procedures and regulatory requirements. POTL currently undertakes regular inspections of POTL controlled port operations to ensure compliance. This will be extended to include PEP construction and operation activities.

14.3 Revised Environmental Impact Assessment

14.3.1 Legislation and policy

The *Environmental Protection (Waste Management) Regulation 2000* was repealed on 29 August 2014. A number of provisions from the regulation were retained to maintain an appropriate level of management proportionate to the risk associated with waste. Amendments were made to the *Environmental Protection Regulation 2008* to give effect to the transfer of retained provisions from the expiring Regulation in relation to waste tracking.

The *Environmental Protection and Other Legislation Amendment Act 2014* partly commenced on 30 September 2015. This Act includes provision to amend the *Environmental Protection Act 1994 and the Environmental Protection Regulation 2008*. Some of the amendments have not yet commenced as necessary implementation arrangements need to be completed or appropriately coordinated. With regards to the PEP waste management, the *Environmental Protection and Other Legislation Amendment Act 2014* replaces the existing beneficial use approval approach in the *Waste Reduction and Recycling Act 2011* with 'end of waste codes and approvals'. This will help meet increased 'resource productivity' set out in the Queensland waste and recycling strategy.

Updates to the legislation and policy in relation to waste do not impact on the assessment presented in the EIS or the refined design.

14.3.2 Design refinement

The revision focusses on amendments to the extent of dredging and reclamation works, however, it does not alter waste management associated with the PEP.

14.3.3 Supporting studies

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

14.3.4 Revised assessment

14.3.4.1 Impact assessment

The impacts of waste generated by the Project are consistent with that identified in Section B.12.4 of the EIS.

14.3.4.2 Mitigation measures

Waste will be managed through the implementation of the waste management hierarchy detailed in B.12.5 of the EIS. As a part of implementing the waste hierarchy mitigation measures identified in Table 14.1 and Table 14.2 will be put in place over the construction and operation of the Project.

Mitigation measures are also outlined in the existing Construction Environmental Management Plan (Appendix B2) and Operational Environmental Management Plan (Appendix B3). The POTL Environmental Management System will be updated to accommodate wastes likely to be generated by the PEP.

14.3.5 Summary

A summary of the mitigation measures proposed to reduce impacts of the Project associated with waste generation is presented in Table 14.1 and Table 14.2.

The main construction works for the PEP relate to building revetments, undertaking dredging works for channel improvements and land reclamation. These types of construction works do not generate large volumes of waste. As a result Table 14.1 relates to secondary wastes from associated construction activities, such as temporary construction facilities. Table 14.2 details wastes from typical port operational activities.

Table 14.1 Construction Phase - Mitigation Measures

Waste	Mitigation Measures
Concrete and bricks	▪ Provide separate stockpile for waste concrete or brick products to avoid contamination with any other waste stream assisting its potential re-use. ▪ Re-use onsite as hard fill. ▪ Removal to recycling facility.

Waste	Mitigation Measures
Timber	▪ Provide separate stockpile or bin. ▪ Use excess or waste timber in other construction processes where possible.
Pavement and asphaltic products	▪ Provide appropriate bunded and covered locations for the storage of asphaltic products. ▪ Re-use excess products either on or off site or dispose of appropriately.
Metals	▪ Provide separated stockpile or bin for storage, one for each ferrous and nonferrous metal. ▪ Remove to recycling facility.
Hydrocarbons, chemicals and other liquids (excluding sewage)	▪ Provide specific waste bins/receptacles to isolate liquid wastes. ▪ Provide onsite storage and handling compatible with local recycling facilities to separate recyclable waste from non-recyclable waste. ▪ Avoid comingling with other waste streams. ▪ Store in appropriately bunded area.
Sewage	▪ Work with licensed contractor to accurately determine the number of temporary ablution facilities required during the construction phase. ▪ Sewage to be removed via a temporary connection to reticulated waste water system if possible.
General office waste	▪ Provide facilities for the appropriate separation of wastes for recycling. ▪ Engage licensed waste contractor to regularly remove and dispose of waste at licensed facilities and maintain waste disposal areas. ▪ Educate staff to reduce waste. ▪ Where possible source materials from suppliers who participate in the Australian Packaging Covenant. ▪ Implement recycling and reuse industry practice procedures where practical. ▪ Storage in sealed bins to reduce vermin attraction. ▪ Store and remove garbage to minimise pest attraction and breeding potential.
Hazardous and potentially hazardous waste	▪ Maintain inventory and material safety data sheets for hazardous substances. ▪ Store in appropriately bunded area. ▪ Bring only the minimum required amount of any substance required by construction activities to site. ▪ Store drums and storage containers when empty or containing residual amounts of substances in bunded area. ▪ Collect empty drums for re-use or recycling.

Table 14.2 Operational Phase - Mitigation Measures

Waste	Mitigation Measures
Garbage	▪ Identify specific waste management locations in the Project Area during detailed design. Supply designated collection bins or other appropriate containers to facilitate segregation and encourage waste recycling or re-use. Use internationally recognised signage. ▪ Keep loose waste and bins covered to secure waste to prevent wind, rain or animals spreading litter or contaminants through the port. ▪ Maintain the Project Area in a clean and tidy manner and progressively remove waste from site and do not allow to stockpile. ▪ Collect and dispose wastes from ships (liquid and other) by licensed contractors and at licensed waste disposal facilities. ▪ Remove any trade or regulated waste by a licensed trade waste contractor to a licensed reception facility. ▪ Store and remove garbage to minimise pest attraction and breeding potential.
Wastes from commercial cargo activities (incidental waste, spills etc.)	▪ Transport cargos in correct containers, which are maintained and handled in accordance with industry and manufacturer standards. ▪ Operators to implement appropriate training for staff involved in the handling of cargo.
Hydrocarbons, chemicals and miscellaneous liquid wastes	▪ Handle liquids in accordance with the appropriate material safety data sheets and manufacturer specifications. ▪ Transport and store chemicals in containers fit for purpose. ▪ Use spill kits to address spills as necessary. ▪ Call emergency services to assist with hazardous material spills.
Sewage	▪ Dispose greywater and sewage from the Project Area to the Townsville City Council local sewerage system. Prior to finalisation of the PEP design, provide Townsville City Council with likely flow volumes and trunk connection points for water and sewerage and undertake a network analysis to assess potential impacts on existing infrastructure. ▪ Individual port tenants to negotiate trade waste agreements with licensed contractors for removal of wastes not able to be disposed of to the domestic sewerage infrastructure.

Waste	Mitigation Measures
Hazardous waste	▪ Port tenants to develop and maintain a complete inventory, including materials safety data sheets, of chemicals to be used on their respective sites. Store chemicals and fuels, including empty drums, in appropriately bunded areas in accordance with relevant regulations. Keep the volumes of chemicals/fuels on site to a minimum. Remove waste chemicals and fuels from the site by licensed waste contractors to approved waste facilities. ▪ Handle and dispose any contaminated material in accordance with legislative requirements.
Quarantine waste	▪ Record the movement and quantities of regulated and quarantine wastes. ▪ Ships berthing at the Port of Townsville to adhere to relevant MARPOL annexes and other legislative requirements with regard to the disposal of quarantine wastes.

14.4 Conclusion

The PEP will generate waste associated with construction and operational activities. With the implementation of mitigation measures presented in the EIS and also provided in Table 14.1 and Table 14.2, the potential impact to the environment, community and port users, from waste will be appropriately managed.