



Rio Tinto Alcan - South of Embley Project
Construction Marine & Shipping Management Plan
INDEPENDENT REVIEW
14 July 2015

SUBMITTED BY EMAIL TO:

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| | |
|---|----|
| DISCLAIMER | 2 |
| ACRONYMS USED | 3 |
| 1. BACKGROUND | 4 |
| 2. REVIEW FINDINGS..... | 6 |
| 2.1 General Review Comments | 6 |
| 2.2 Review Against Review Criteria | 31 |
| ANNEX 1: SPECS for CONSTRUCTION PHASE VESSELS | 45 |
| ANNEX 2: SUGGESTED REVISED SECTION 6.7 | 46 |

DISCLAIMER

1. The views and opinions expressed in this report are those of the Independent Reviewer alone, according to the best of his knowledge and expertise.
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5. The Independent Reviewer shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance upon, this report.

ACRONYMS USED

| | |
|-------------|--|
| DEHP | (Queensland) Department of Environment & Heritage Protection |
| EIS | Environmental Impact Statement |
| EPBC Act | Environment Protection & Biodiversity Conservation Act |
| RTA | Rio Tinto Alcan Weipa Pty Ltd |
| SoE Project | South of Embay bauxite mine and port development project |
| TO | Traditional Owner (local indigenous community) |

1. BACKGROUND

1. This report constitutes an Independent Review of the Construction Marine & Shipping Management Plan that has been developed by Rio Tinto Alcan Weipa Pty Ltd (RTA), for the South of Embley bauxite mine and port development project (the SoE Project), located south of Weipa on the west coast of Cape York, Queensland, Australia.
2. The SoE Project was approved by the Australian Minister for the Environment under sections 130(1) and 133 of the *Environment Protection & Biodiversity Conservation Act* (the EPBC Act), on 14 May 2013 (EPBC Approval 2010/5642).
3. Conditions 5 to 8(i) of the EPBC Approval require RTA to develop a Construction Marine & Shipping Management Plan (the Plan), which documents the principles and practices under which all marine based activities (including shipping) associated with the construction of the SoE Project will be carried out. The purpose of the Plan is to avoid, mitigate and manage impacts from the construction phase on the following Matters of National Environmental Significance (NES) under the EPBC Act:
 - a) the outstanding universal value of the Great Barrier Reef World Heritage Property (GBRWHP),
 - b) the Great Barrier Reef National Heritage Place (GBRNHP),
 - c) the Great Barrier Reef Marine Park (GBRMP); and
 - d) listed marine turtle species, cetacean species and also Dugong.
4. In accordance with Condition 8(i) of the EPBC Approval, the Plan applies to construction phase marine and shipping activities only, and RTA will develop a separate Marine & Shipping Management Plan for the operational phase of the Project. Construction phase activities covered by the Plan include:
 - a) **Temporary Passenger Jetty** (for personnel) (may no be required): In Boyd Bay or at Boyd Point to provide access for the construction workforce to the Project site (a separate Temporary Barge Facility for cargo is addressed in the separate Temporary Barge Plan).
 - b) **Barge, ferry and tug facilities:** Within the existing Port of Weipa - for transferring material and personnel from Weipa to the Project site, including directly by sea and across the Hey River and then via a new access road to be built from the west bank of Hey River to the Project site.
 - c) **Port and ship-loading facilities:** The actual port infrastructure to be built between Boyd Point and Pera Head, including the main jetty, bulk carrier wharf and berthing structures, ship-loader, tug and line-boat moorings and dredging of berth pockets and channel (dredging is addressed in separate Dredge Management Plans); and
 - d) **Shipping activities:** The transport of cargo and fuel required for construction, which will predominantly be delivered to the existing Port of Weipa from

international and domestic ports via existing shipping routes, and then transferred to the Project site either directly by vessel or across the Hey River and then by road.

5. Conditions 60 to 62 of the EPBC Approval require RTA to commission a review of the Plan by an Independent Reviewer who is approved by the Minister, against Review Criteria that are also approved by the Minister.
6. The author of this report has been approved as the Independent Reviewer and the approved Review Criteria are listed in Table 2 in section 2.2 of this report, along with the Reviewer's findings and comments against each Criteria.
7. The version of the Plan that was reviewed for this report is:

Rio Tinto Alcan Weipa, SoE Construction Marine and Shipping Management Plan DRAFT 03 July 2014 (Document Control: Review and approval by Project team - Approved 25/06/2014).

2. REVIEW FINDINGS

2.1 General Review Comments

1. Each section of the Plan was reviewed in sequence and general review comments on each section are presented in Table 1. These general review comments were then used as the basis for more detailed assessment of the Plan against the approved Review Criteria as presented in section 2.2 and Table 2 below.
2. Overall the Plan is found to comprehensively address the Approval Conditions and the approved Review Criteria, with most items being addressed thoroughly according to relevant regulatory requirements and best practices. Overall it is a very strong and well-developed Plan.
3. The Plan is based primarily on the fact that all construction phase marine and shipping activities are 'naturally' required by law to comply with all relevant laws and regulations irrespective of the existence or not of such a plan, and the Plan includes a very comprehensive and thorough summary of all of the main, relevant international, national and State maritime regulatory requirements.
4. The Plan further strengthens the 'natural' requirement for all construction phase marine and shipping activities to comply with all relevant laws and regulations, by adding contractual requirements for RTA contractors and charter providers to comply with such, including a clear framework and mechanism for RTA to monitor and enforce such compliance, and to report, respond to and adaptively correct any non-compliances.
5. There are several minor areas and three more significant areas where the Plan could be improved so as to fully address the Approval Conditions and the approved Review Criteria.
6. The minor areas for improvement relate to providing additional data on construction phase shipping, and some minor technical errors. There is a need for the Plan to provide more detailed data and specifications on the vessels that will be used during the construction phase, including whether they will be landing-craft, self-propelled barges, dumb-barges with attendant tugs or other vessels, their overall dimensions (length, beam & draft), what types and volumes of fuel, lubricating oils and other potential pollutants they will carry, how many crew they will have, and how much sewage, garbage etc will be generated by the crew.
7. This information is fundamental to informing the assessment of oil spill risk and the development of an oil spill preparedness and response plan that is adequate to address such risk, and to informing the assessment of demand for vessel waste reception facilities and developing a vessel waste reception plan that is adequate to address such demand. It is also important to provide more information on vessels that will be used in the actual construction of the port and trestle jetty, such as jackup barges, crane barges, pile driving barges, barges used to carry piles and jetty components alongside the

construction, supporting tugs and various other work vessels and support boats. Such vessels are the highest risk in terms of biofouling risks, are the highest likelihood of potential spills, especially during bunkering, and will remain on-site for extended periods throughout the construction phase, generating the most demand for waste reception and management. Section 2.2.2. currently seems to 'down-play' these vessels despite the fact that they are the most significant in terms of risks – this is a gap in the Plan and needs to be addressed. It is recommended to add a table along the lines contained in Annex 1 to this review.

8. The three more significant areas for improvement relate to:

- a) Oil spill preparedness and response arrangements: Need a risk assessment to support and inform contingency planning, and a supplementary Oiled Wildlife Plan, consistent with AMSA standards and guidance,
- b) Vessel waste reception and management: Need an assessment of demand and a supplementary Vessel Waste Reception & Management Plan that is adequate to meet this demand, consistent with IMO standards and guidance; and
- c) Marine pest introductions (esp. via biofouling): Need a supplementary Marine Biosecurity Plan which simplifies, clarifies and tightens biofouling risk assessment and management controls, including clear and approved risk criteria and a need for physical inspection of all vessels that are deemed to be higher than low risk, before mobilisation to site.

9. Summary review comments for each of these three areas are as follows:

a) **Oil spill preparedness and response arrangements:**

Section 6.4.2 and its subsections 6.4.3 to 6.4.7 provide a very comprehensive and thorough description of spill preparedness and response arrangements, which are consistent with the relevant State and National plans, and are strongly supported by this Reviewer.

However, oil spill preparedness & response arrangements should be designed to address the level of assessed oil spill risk. The Plan does not include any information on risk. It is therefore not possible for this Reviewer to assess if the proposed spill preparedness and response arrangements are adequate with regard to the level of risk.

A proper oil spill risk assessment needs to be carried out for all stages, components and geographical areas of the construction phase and a brief summary of the findings included in the Plan, or in the supplementary SoE Construction Phase Oil Spill Preparedness & Response Plan. This should include:

- The types and volumes of oil/fuel that will be carried through different areas and on what types and sizes of vessels.
- The potential sources, hazards/causes, sizes, consequences, likelihoods and risks (consequence x likelihood) of spills.
- A focus on bunkering and/or oil/fuel transfers – including where, when, how, what oil/fuel types, volumes etc (NOTE bunkering/transfers present highest likelihood of spills).

The international standard / guideline for assessing oil spill risk & the adequacy of preparedness and response arrangements is:

- *International Maritime Organization (IMO), 2010. Manual on Oil Spill Risk Evaluation and Assessment of Response Preparedness. IMO Publication 1579E. IMO London.*

The AMSA following publication should also be used as a guide:

- *AMSA, 2015. Technical Guidelines for the Preparation of Marine Pollution Contingency Plans for Marine & Coastal Facilities*

Given the focus of the EPBC Approval Conditions on protection of listed marine wildlife species, the SoE Construction Phase Oil Spill Preparedness & Response Plan should include as a sub-plan, an Oiled Wildlife Plan, that is consistent with the following AMSA guidelines:

- *AMSA, 2002. National Guidelines for Development of Oiled Wildlife Response Contingency Plans*

b) **Vessel waste reception and management**

Section 6.3 provides a very clearly, comprehensive and thorough framework for the prevention of vessel discharges in accordance with MARPOL and the implementing Australian and Queensland legislation, and is strongly supported by this Reviewer.

However, some improvements are required with respect to vessel waste reception and management (waste oil, sewage and garbage as defined by MARPOL) plus quarantine wastes.

One of the most important management measures to prevent vessel discharges is the provision of ships' waste reception facilities in ports (e.g. if vessels can discharge their waste oil, garbage etc into port waste reception facilities – they are less likely to discharge illegally at sea – whereas if reception facilities are inadequate or do not exist, vessel crews may be tempted to discharge illegally at sea).

The wording outlining how these will be received and managed has gaps and some deficiencies. For example 3rd para on page 34 states that “*quarantine waste cannot be accepted*” and “*vessels will be required to keep quarantine wastes on board until it can be disposed of . . .*”.

This is entirely inadequate and is akin to a City Council telling residents that they must keep their wastes until they can find a way to dispose of it themselves. If proper quarantine waste reception and management facilities are not provided for the construction phase of the project, vessels that are forced to keep such wastes on board will be tempted to dispose of them illegally at sea. It is imperative that RTA ensures that appropriate, adequate and AQIS-approved quarantine reception and management facilities are provided for the construction phase.

Similar statements are made in section 6.3.1 regarding vessels being required to keep other wastes (oil, sewage, garbage) on board if they cannot be received and managed at Weipa or Boyd site.

Contractually requiring vessels to keep such wastes on board for disposal elsewhere is totally unacceptable. ***The Project needs to take full responsibility for ALL wastes that are generated as part of the Project, and not push these elsewhere.***

A fundamental and essential component of planning for the provision of vessel waste reception facilities is to start with assessing the likely ‘demand’ for such facilities that will be generated by project vessels, considering the types and numbers of vessels and the types and volumes of waste and the frequency with which they will be generated. Without this underlying assessment of ‘demand’, it is not possible to plan for and provide vessel waste reception facilities that are ‘adequate’ to meet the ‘demand’. Nowhere does the Plan give any indication at all of the likely ‘demand’ and it is therefore not possible for this reviewer to properly assess if the proposed management arrangements are ‘adequate’.

To address this issue it is recommended that an additional supplementary management plan be developed - “Ships’ Waste Reception & Management Plan (SWRMP)” for the receipt and management of waste oil, sewage and garbage (as defined by Annexes I, IV and V of MARPOL respectively), and including quarantine wastes, from construction phase shipping at both Weipa and the Boyd Point project site. It is recommended that the SWRMP should include an assessment of the ‘demand’ for ships’ waste reception facilities, considering the types and volumes of waste that are likely to be generated by construction phase shipping, and the provision and operation of ships’ waste reception facilities that are ‘adequate’ to meet this demand. The assessment of ‘demand’ and the criteria for ‘adequacy’ should be in accordance with:

- IMO, 2009. Guide to Best Practice for Port Reception Facility Providers and Users MEPC.1/Circ.671/Rev.1.

- IMO, 2000. Guidance for Ensuring the Adequacy of Port Waste Reception Facilities. IMO Publication 598E.
- IMO 1999. Comprehensive Manual on Port Reception Facilities IMO Publication 597E.

It is recommended that the SWRMP be independently reviewed once drafted.

c) **Marine pest introductions (esp biofouling)**

This is perhaps the most important area where the plan needs to be as stringent as possible in incorporating and implementing best practices to PREVENT potential marine pest introductions during the construction phase.

The introduction of marine pests via ships ballast water and biofouling can cause significant and often irreversible ecological, socioeconomic and even public health impacts - depending on the pest species.

The potential introduction of marine pests to the Port of Weipa and to the Boyd Point area via construction shipping is a serious concern requiring a comprehensive management plan to address. The Boyd Point port is a near-pristine green-field site that has never been exposed to marine pest inoculation vectors. Any introductions to the site, either during the construction or operational phases, have the potential to spread to other areas in the sensitive Gulf of Carpentaria, both naturally via currents and via transshipping. It is therefore necessary to make every effort to PREVENT the Boyd Point port becoming a point of entry for marine pests.

Annex 2 to this Review contains a recommended re-wording of section 6.7 in order to tighten up this aspect of the Plan.

With regard to the biofouling vector (section 6.7.2), the types of vessels used during construction, including landing craft, self-propelled barges, dumb barges, crane barges, jack-up barges, tugs and support craft, can constitute a high risk, as they are generally slow moving, can spend long periods of time relatively stationary in ports, accumulating biofouling, and they may be sourced from high risk areas such as South East Asia and other tropical ports in Australia (Queensland East coast, Northern Territory or Northern Western Australia), where there have been outbreaks of marine pest species of concern (e.g. the Asian green mussel (*Perna viridis*) and Asian bag mussel (*Musculista senhousia*) in Cairns and the black-striped mussel (*Mytilopsis sallei*) in a Darwin marina in 1999).

Section 6.7.2 addresses biofouling through a risk-based approach to be applied to construction vessels on a case-by-case basis. This approach is fundamentally sound and strongly supported by this Reviewer, however it is clumsily worded and has a number of gaps, uncertainties and ambiguities which may result in

deficiencies and a failure to prevent marine pest introductions via biofouling during the construction phase. This aspect needs tightening to remove gaps, uncertainties and ambiguities.

This section of the Plan states that the measures proposed are consistent with previous assessment methods completed for Queensland projects (BMA 2014) - however that reference is for Hay Point which is a long-established major port that has been receiving large ships and which has undergone several major expansion construction projects over several decades. The same applies to other major east coast port expansions such as Gladstone - compared to Boyd Point which is a near-pristine greenfield site that could become a new marine pest inoculation entry point for the Gulf of Carpentaria.

It is necessary to apply truly "Best Practices" to biofouling management at Boyd Point and these are provided by:

- *IMO 2012 - International Maritime Organization (IMO) Guidelines for the Control & Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species, IMO Publication 1662E.*
- *Commonwealth of Australia, 2009. National Biofouling Management Guidelines for Non-Trading Vessels.*
- *Commonwealth of Australia, 2008. National Biofouling Management Guidelines for Commercial Vessels.*

A central tenant of these Best Practice guidelines is that highest priority should be given to PREVENTING the introduction of pest species to the project site by addressing risks as close to their source ports as possible, and should be based on the principle of 'layered defense', with management arrangements organized along established world's best practice in the fields of bio-security and quarantine, as follows:

- Pre-border (incursion prevention)
- At-Border (incursion interdiction)
- Post-border (incursion response, control and mitigation)

Annex 2 to this Review contains a recommended re-wording of section 6.7 in order to tighten up this aspect of the Plan and to remove uncertainties and ambiguities in the current wording. The main tightening is a recommendation that:

- Risk criteria be very clear and approved.
- All vessels rated above low risk will be required to undergo a physical marine pest inspection by personnel with qualifications and experience in marine pest identification, either by diving or drop cameras, and be

certified as being free of biofouling, according to set criteria, prior to mobilisation to site / entry to site.

- All vessels and marine plant and equipment that are sourced from other tropical Australian ports (north of Tropic of Capricorn) or any port in South East Asia, will automatically be considered to be potentially high risk, and will be required to undergo a physical marine pest inspection by personnel with qualifications and experience in marine pest identification, either by diving or drop cameras, and be certified as being free of biofouling, according to set criteria, prior to mobilisation to site / entry to site.
- Vessels found to have biofouling above the set criteria will be required to implement additional management measures such as hull and niche space cleaning and seawater systems treatment, and be re-inspected and certified prior to mobilisation to site / entry to site.

The supplementary marine Biosecurity Management Plan should be independently reviewed once drafted.

10. In summary, while overall the Plan is generally found to comprehensively and thoroughly address the Approval Conditions and the approved Review Criteria, in accordance with relevant regulatory requirements and best practices, the inclusion of these recommended improvements will address some small but important gaps relating to the critical areas of oil spill preparedness and response, vessel waste management and the prevention of marine pest introductions via biofouling.

11. There are a number of other minor recommended improvements for certain issues as outlined in Tables 1 and 2 below.

TABLE 1: General Review Comments on sections 1 to 10 of the Construction Marine & Shipping Management Plan

| Section of Plan | Review Comment | RTA Response |
|------------------------------|--|--|
| 1. Purpose | | |
| 1.1 Purpose of the Plan | <ul style="list-style-type: none"> No improvements recommended: The purpose of the Plan is clearly outlined, is well supported by two Figures/Maps and is consistent with the Approval Conditions. | Noted |
| 1.2 Related Management Plans | <ul style="list-style-type: none"> Some improvements recommended: The development of supplementary management plans for specific issues is useful and commended however this Reviewer cannot assess their adequacy without seeing these plans. Ideally all proposed management measures for all issues should have been included in the main Plan so that they could be reviewed for compliance with the Approval Conditions and Review Criteria. It is recommended that all supplementary management plans should be sent for independent review once drafted. It is noted that the <u>Biosecurity Management Plan</u> will address quarantine issues relating to cargo and waste only and <u>not</u> to <u>marine</u> biosecurity (vessel biofouling and ballast water). It is recommended that an additional supplementary management plan be developed - "<u>Marine Biosecurity Management Plan (MBSMP)</u>" which specifically addresses vessel biofouling and ballast water (see comments on Section 6.7 of the Plan below). It is recommended that the MBSMP should give highest priority to PREVENTING the introduction of pest species to the project site by addressing risks as close to their source ports as possible, and should be based on the principle of 'layered defense', with management arrangements organized along established world's best practice in the fields of bio-security and quarantine, as follows: | <ul style="list-style-type: none"> All management measures for shipping were included in the CMSMP and the reviewer has identified these as thorough and comprehensive (unless otherwise noted and discussed further in this document). The reference to the other Plans was to demonstrate the overarching environmental management for the project with many of these out of the scope of this document review (eg dredging). Accordingly no review is necessary or warranted. Management Plans that require approval due to Conditions will or have been independently peer reviewed. Correct, the Biosecurity Management Plan does not address marine biosecurity; Marine Biosecurity Management Measures are addressed in this plan Section 6.7. Marine Biosecurity Management is fully addressed in this Plan at Section 6.7 and accordingly RTAW disagree a Marine Biosecurity Management Plan is necessary. The current Marine pest management focuses on preventing the incursion of marine pests and presents a layered defence. |

| Section of Plan | Review Comment | RTA Response |
|-----------------|---|--|
| | <ul style="list-style-type: none"> ○ Pre-border (incursion prevention) ○ At-Border (incursion interdiction) ○ Post-border (incursion response, control and mitigation) • It is recommended that the MBSMP should be consistent with and incorporate best practices from: <ul style="list-style-type: none"> ○ The Quarantine Act. ○ The Australian National Biofouling Management Guidance for Commercial Vessels. ○ The Australian National Biofouling Management Guidance for Non-trading Vessels. ○ The IMO Guidelines on the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species (MEPC 62/24/Add.1 Annex 26). ○ The International Convention for the Control and Management of Ships' Ballast Water and Sediments and its supporting guidelines. • It is recommended that an additional supplementary management plan be developed - "<u>Ships' Waste Reception & Management Plan (SWRMP)</u>" for the receipt and management of waste oil, sewage and garbage (as defined by Annexes I, IV and V of MARPOL respectively) plus quarantine wastes from construction phase shipping at both Weipa and the Boyd Point project site (see comments on Section 6.3.1 of the Plan below). It is recommended that the SWRMP should include an assessment of the "<u>demand</u>" for ships' waste reception facilities, considering the types and volumes of waste that are likely to be generated by construction phase shipping, and the provision and operation of ships' waste reception facilities that are "<u>adequate</u>" to meet this demand. The assessment of "<u>demand</u>" and the criteria for "<u>adequacy</u>" should be in accordance with: <ul style="list-style-type: none"> ○ IMO, 2009. Guide to Best Practice for Port Reception Facility Providers and Users MEPC.1/Circ.671/Rev.1. ○ IMO, 2000. Guidance for Ensuring the Adequacy of Port Waste Reception Facilities. IMO Publication 598E. ○ IMO 1999. Comprehensive Manual on Port Reception Facilities IMO Publication 597E. • Given the focus of the EPBC Approval Conditions on protection of listed | <ul style="list-style-type: none"> • The current Marine Pest Management Measures are consistent with current practices and consistent with National requirements and are outlined in Section 6.7. • Ships waste management is addressed in Section 6.3 of this plan and accordingly RTAW disagree that an additional management plan is necessary. All management measures were included in the plan and the reviewer has identified these as comprehensive (unless otherwise noted and discussed further in this document). |

| Section of Plan | Review Comment | RTA Response |
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| | marine wildlife species, the SoE Construction Phase Oil Spill Preparedness & Response Plan should include as a sub-plan, an <u>Oiled Wildlife Plan</u> , that is consistent with AMSA's " <u>National Guidelines for Development of Oiled Wildlife Response Contingency Plans</u> " and AMOSC's oiled wildlife guidance. | <ul style="list-style-type: none"> Queensland Department of Environment and Heritage Protection (DEHP) are responsible for all wildlife matters during a marine pollution event and have a system of contingency plans, trained staff and equipment to respond. DEHP have indicated it is not necessary or encouraged for RTAW to have a wildlife response plan. |
| 2. Background | <ul style="list-style-type: none"> See below. | |
| 2.1 Project Approval Conditions | <ul style="list-style-type: none"> No specific comments. | Noted |
| 2.2 SoE Project Description Summary | <ul style="list-style-type: none"> No specific comments. | Noted |
| 2.2.1 Project Facilities | <ul style="list-style-type: none"> No specific comments. | Noted |
| 2.2.2 Shipping Activities | <ul style="list-style-type: none"> Some improvements recommended: As the Plan is all about shipping impacts – this section needs better information on the actual types, sizes and numbers of vessels that will be involved in the construction phase, described using proper maritime terminology for vessel types (LOA, GT etc). This information is fundamental to informing the assessment of oil spill risk and the development of an oil spill preparedness and response plan that is adequate to address such risk, and to informing the assessment of | <ul style="list-style-type: none"> The project is currently in planning and this information cannot be provided with the accuracy requested. RTAW have taken a precautionary approach that accommodates the breadth of vessel types, sizes and numbers involved during the construction phase. The proposed management methods to be implemented are consistent and in line with legislation and other projects across Australia to effectively manage risk. Information on the number and type of vessels will be included in the supplementary Oil Spill |

| Section of Plan | Review Comment | RTA Response |
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| | <p>demand for vessel waste reception facilities and developing a vessel waste reception plan that is adequate to address such demand.</p> <ul style="list-style-type: none"> • Most relevant to the Plan is information on the types and volumes of oil and fuel that will be carried by all of the various vessels – this should be added as a table along the lines contained in Annex 1 to this review. • This section focuses mainly on cargo and fuel shipments – with limited information (last dot point only) on vessels that will be used in the actual construction of the port and trestle jetty, such as jackup barges, crane barges, pile driving barges, barges used to carry piles and jetty components alongside the construction, supporting tugs and various other work vessels and support boats. These vessels: <ul style="list-style-type: none"> ○ are the highest risk in terms of biofouling risks, ○ are the highest likelihood of potential spills, especially during bunkering, ○ will remain on-site for extended periods throughout the construction phase, generating the most demand for waste reception and management. • Section 2.2.2. currently seems to ‘down-play’ these vessels despite the fact that they are the most significant in terms of risks – this is a gap in the Plan and needs to be addressed. It is recommended to add a table along the lines contained in Annex 1 to this review. | <p>Management Plan for Boyd Port. Current waste reception facilities are sufficient with additional services provided as necessary.</p> <ul style="list-style-type: none"> • This information is provided in the Port of Weipa First Strike Oil Spill Response Plan and will be provided in the Boyd Port Plan. RTAW disagree this information is necessary in this plan but agree that information on likely spills should be included in the oil spill management plan. • Management methods encompass all vessels, no matter the type and do not seek to “down-play” any risk. The management methods are consistent with other construction shipping management plans which have effectively been implemented on projects with similar risks without incident. Effective biofouling management, spill management and waste management measures have been outlined for the entire fleet regardless of vessel size. The reviewer suggested a Table be provided in Annex 1 that detailed vessel types. As previously stated, RTAW have considered the range and magnitude of shipping activities and therefore this level of detail will not change the robustness of the proposed management arrangements. |
| 3. Matters of National Environmental Significance | <ul style="list-style-type: none"> • No specific comments. | <p>Noted</p> |
| 4. Maritime Regulatory Regime | <ul style="list-style-type: none"> ▪ No improvements recommended. Strong section. ▪ Provides a very comprehensive and thorough summary of all of the main, relevant international, national and State maritime regulatory requirements, including specific provisions applying to the Great Barrier Reef, supported | <p>Noted</p> |

| Section of Plan | Review Comment | RTA Response |
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| | <p>by very comprehensive summary Tables in Appendices B & C.</p> <ul style="list-style-type: none"> ▪ Note: RTA has been conducting vessel operations through the relevant areas including Great Barrier Reef in accordance with this regime for many decades without incident. | |
| 4.1 Special provisions in the Great Barrier Reef | <ul style="list-style-type: none"> ▪ No improvements recommended. Strong section. ▪ Provides a very comprehensive and thorough summary of all of the main, relevant provisions applying to the Great Barrier Reef, supported by very comprehensive summary Tables in Appendices B & C. | Noted |
| 4.2 Compliance by SoE Construction Shipping | <ul style="list-style-type: none"> ▪ No improvements recommended. Strong section. ▪ States that all construction phase marine and shipping activities are 'naturally' required by law to comply with all relevant laws and regulations irrespective of the existence or not of such a plan. ▪ Further strengthens the 'natural' requirement for all construction phase marine and shipping activities to comply with all relevant laws and regulations, by adding contractual requirements for RTA contractors, sub-contractors and charter providers to comply with such. | Noted |
| 4.3 North East Shipping Management Plan | <ul style="list-style-type: none"> ▪ No improvements recommended. Strong section. ▪ While compliance with the NESMP is not an explicit requirement of the Approval Conditions nor an explicit Review Criteria, it was adopted by Aus and Qld Govts in 2014 and now constitutes a significant part of arrangements to manage shipping through the GBR and Torres Strait region, and compliance with it is therefore implicit in the need to prevent and manage SoE construction shipping impacts on the GBR WHP, NHP & MP. ▪ RTA's inclusion of this in the Plan is therefore commended. | Noted |
| 5. Project Environmental Framework | <ul style="list-style-type: none"> ▪ One improvement recommended: ▪ Provides a clear framework and mechanism for RTA to monitor and enforce compliance by contractors, sub-contractors and charter providers, and to report, respond to and adaptively correct any non-compliances. ▪ Small improvement required under 5.2 - incidents – notifying and reporting incidents to regulatory agencies should not just be restricted to what is required under SoE Project ECBC Approval, but should include ALL mandatory incident reporting requirements under ALL relevant legislation | As outlined in Section 4, assessed by the reviewer as a "Strong section", all vessels are contractually required to comply with all laws and all mandatory reporting requirements will be completed as required. Therefore |

| Section of Plan | Review Comment | RTA Response |
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| | (e.g. oil spills MUST be reported to relevant regulatory agency ASAP and DIRECTLY by the POLLUTER (not via RTA) under AMSA PS(PPS) Act and Qld TOMP Act and Qld Environment Act also has certain incident reporting requirements. | no change has made to this section. |
| 6. Potential Impacts, Avoidance, Mitigation & Management Measures | <ul style="list-style-type: none"> See below. | |
| 6.1 Underwater Noise from Pile Driving | <ul style="list-style-type: none"> One improvement recommended: The last dot point that pile driving that has commenced before sunset or a period of low viz will be allowed to continue after sunset is not understood. Pile driving should not occur AT ALL at night or during periods of low viz when marine life cannot be observed, regardless of when the pile driving started | <p>This is consistent with approval condition 12f and taken directly from the approval conditions. Accordingly no change has been made.</p> <p>Marine fauna will avoid the area surrounding piling activities due to noise levels (Brandt et al 2011¹).</p> |
| 6.2 Underwater Vessel Noise | <ul style="list-style-type: none"> No improvements recommended. Strong section. | Noted |
| 6.3 Prevention of Marine Pollution | <ul style="list-style-type: none"> See sub-sections below. | Noted |
| 6.3.1 Vessel discharges & waste management | <ul style="list-style-type: none"> No improvements recommended with regard to prevention of vessel discharges per se. Strong section. This section clearly, comprehensive and thoroughly provides for the prevention of vessel discharges in accordance with MARPOL and the implementing Aus and Qld legislation. | <p>Noted</p> <ul style="list-style-type: none"> Section 6.3.1 identifies waste generated on board the vessels (except quarantine waste) will be accepted at Evans Landing Waste Facility and |

¹ Brandt MJ, Diederichs A, Betke K and Nehls G. (2011) Response of harbour porpoises to pile driving at the Horns Rev II offshore wind farm in the Danish North Sea. *Marine Ecology Progress Series*. Vol 421:205-216

| Section of Plan | Review Comment | RTA Response |
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| | <ul style="list-style-type: none"> • However, some improvements are required with respect to vessel waste reception and management (waste oil, sewage and garbage as defined by MARPOL) plus quarantine wastes. • One of the most important management measures to prevent vessel discharges is the provision of ships' waste reception facilities in ports (e.g. if vessels can discharge their waste oil, garbage etc into port waste reception facilities – they are less likely to discharge illegally at sea – whereas if reception facilities are inadequate or do not exist, vessel crews may be tempted to discharge illegally at sea). • The wording outlining how these will be received and managed has gaps and some deficiencies. For example: <ul style="list-style-type: none"> ○ 3rd para on page 34 states that “<i>quarantine waste cannot be accepted</i>” and “<i>vessels will be required to keep quarantine wastes on board until it can be disposed of . . .</i>”. This is entirely inadequate and is akin to a City Council telling residents that they must keep their wastes until they can find a way to dispose of it themselves. If proper quarantine waste reception and management facilities are not provided for the construction phase of the project, vessels that are forced to keep such wastes on board will be tempted to dispose of them illegally at sea. It is imperative that RTA ensures that appropriate, adequate and AQIS-approved quarantine reception and management facilities are | <p>transported to appropriate facilities as per the current waste management procedures. To make this clearer the paragraph has been rewritten as follows: <i>“Waste reception services will be provided by the project for reception of vessel wastes, excluding quarantine waste. Waste will be segregated on board the vessel in accordance with “Guide to Best Practice for Port Reception Facility Providers and Users” (MEPC.1/Circ.671/Rev.1), where appropriate. Waste will be transferred to a vessel or directly to wharf facilities for holding or disposal at Evans Landing Waste Facility. Waste that cannot be disposed of at the local facility will be placed in appropriate containers or tanks and transported (e.g. barged) to appropriate recycling, reuse or waste facilities as per the facilities management practices.”</i></p> <p>As outlined by the reviewer, this is one of the most important management measures and complies with the requirements.</p> <ul style="list-style-type: none"> • RTAW disagree that the proposed quarantine waste management is inadequate. The management is standard practice in projects across Australia where quarantine material cannot be accepted, which includes the Port of Weipa (NQBP 2012 Port Handbook, Port of Weipa). Not all vessels will be staying on site for lengthy periods of time (e.g. Cargo vessel) and is an appropriate management method. As detailed in the Plan in Section 6.3.1, vessels will undergo an AQIS inspection with all material bagged, stored and marked appropriately. It is RTAW's requirement to ensure vessels comply with AQIS requirements with all vessels contractually required to comply with relevant regulations and dispose of waste in accordance with methods approved by AQIS. |

| Section of Plan | Review Comment | RTA Response |
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| | <p>provided for the construction phase.</p> <ul style="list-style-type: none"> Similar statements are made in section 6.3.1 regarding vessels being required to keep other wastes on board if they cannot be received and managed at Weipa or Boyd site. <p>Contractually requiring vessels to keep such wastes on board for disposal elsewhere is totally unacceptable. <i>The Project needs to take full responsibility for all wastes that are generated as part of the Project, and not push these elsewhere.</i></p> <ul style="list-style-type: none"> A fundamental and essential component of planning for the provision of vessel waste reception facilities is to start with assessing the likely '<u>demand</u>' for such facilities that will be generated by project vessels, considering the types and numbers of vessels and the types and volumes of waste and the frequency with which they will be generated. Without this underlying assessment of '<u>demand</u>', it is not possible to plan for and provide vessel waste reception facilities that are '<u>adequate</u>' to meet the '<u>demand</u>'. Nowhere does the Plan give any indication at all of the likely '<u>demand</u>' and it is therefore not possible for this reviewer to properly assess if the proposed management arrangements are '<u>adequate</u>'. To address this issue it is recommended that an additional supplementary management plan be developed - "<u>Ships' Waste Reception & Management Plan (SWRMP)</u>" for the receipt and management of waste oil, sewage and | <ul style="list-style-type: none"> The Reviewers interpretation that all waste (other than quarantine) is to be kept on board is incorrect. Facilities for disposal are provided for all other wastes except quarantine. However, flexibility is provided to enable vessels to dispose of material at other locations if they wish. For example, cargo vessels that travel between locations unloading cargo. RTAW has added the additional statement to ensure all vessels dispose of waste at suitable facilities if not disposing at Weipa. As above, RTAW has taken responsibility for wastes generated on the project with the exception of quarantine waste which will be managed in accordance with AQIS guidelines and as per standard industry practice. The following statement has been added to make this clear "<i>Waste reception services will be provided by the project for reception of vessel wastes, excluding quarantine waste</i>". As identified in Section 6.3.1, waste will be transferred to a vessel or directly to wharf facilities for holding or disposal at the existing Evans Landing Waste Facility. Waste that cannot be disposed of at the local facility will be placed in appropriate containers/tanks and barged to appropriate recycling, reuse or waste facilities as per the facilities management practices. The existing Weipa requirement is to transport waste that cannot be stored at the existing site facilities out of the area to alternate suitable facilities with appropriate capacity. This ensures facilities are '<u>adequate</u>' to meet '<u>demand</u>'. These facilities may be on the east coast of Australia (e.g. Townsville) and is standard operating practice where limited waste facilities exist. |

| Section of Plan | Review Comment | RTA Response |
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| | <p>garbage (as defined by Annexes I, IV and V of MARPOL respectively), and including quarantine wastes, from construction phase shipping at both Weipa and the Boyd Point project site. It is recommended that the SWRMP should include an assessment of the 'demand' for ships' waste reception facilities, considering the types and volumes of waste that are likely to be generated by construction phase shipping, and the provision and operation of ships' waste reception facilities that are 'adequate' to meet this demand. The assessment of 'demand' and the criteria for 'adequacy' should be in accordance with:</p> <ul style="list-style-type: none"> • IMO, 2009. Guide to Best Practice for Port Reception Facility Providers and Users MEPC.1/Circ.671/Rev.1. • IMO, 2000. Guidance for Ensuring the Adequacy of Port Waste Reception Facilities. IMO Publication 598E. • IMO 1999. Comprehensive Manual on Port Reception Facilities IMO Publication 597E. • It is recommended that the SWRMP be independently reviewed once drafted. | <ul style="list-style-type: none"> • RTAW disagree that an additional "Ships' Waste Reception & Management Plan (SWRMP)" is necessary. Waste management is detailed in the CMSMP. Waste services will be provided for vessels for all waste excluding quarantine, which will be disposed of in accordance with AQIS requirements. As reception services are provided, waste management is considered to address the requirements of the plan. |
| 6.3.2 Anti-fouling emissions | <ul style="list-style-type: none"> ▪ No improvements recommended. Strong section. | Noted |
| 6.3.3. Maritime safety management | <ul style="list-style-type: none"> ▪ Refer section 6.5 below. | Response below |
| 6.4 Spill management & response | <ul style="list-style-type: none"> ▪ Correct title would be <u>spill preparedness and response</u> – spill prevention is already covered comprehensively by section 6.3.1. | Spill management has also been addressed in this section and therefore the Title is considered an appropriate heading. |
| 6.4.1 Spill Management Controls | <ul style="list-style-type: none"> ▪ This section is redundant – covered comprehensively by section 6.3.1 | This section is not redundant as it provides a summary of management measures. |

| Section of Plan | Review Comment | RTA Response |
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| 6.4.2 Spill Response | <ul style="list-style-type: none"> ▪ Strong section but some improvements recommended. ▪ This section and its subsections 6.4.3 to 6.4.7 provide a very comprehensive and thorough description of spill preparedness and response arrangements, which are consistent with the relevant State and National plans. ▪ However, oil spill preparedness & response arrangements should be designed to address the level of assessed oil spill risk. The Plan does not include any information on risk. It is therefore not possible for this Reviewer to assess if the proposed spill preparedness and response arrangements are adequate with regard to the level of risk. ▪ A proper oil spill risk assessment needs to be carried out for all stages, components and geographical areas of the construction phase and a brief summary of the findings included in the Plan, or in the supplementary SoE Construction Phase Oil Spill Preparedness & Response Plan. This should include: <ul style="list-style-type: none"> ○ The types and volumes of oil/fuel that will be carried through different areas and on what types and sizes of vessels. ○ The potential sources, hazards/causes, sizes, consequences, likelihoods and risks (consequence x likelihood) of spills. ○ A focus on bunkering and/or oil/fuel transfers – including where, when, how, what oil/fuel types, volumes etc (NOTE bunkering/transfers present highest likelihood of spills). ▪ The international standard / guideline for assessing oil spill risk & the adequacy of preparedness and response arrangements is: “<i>International Maritime Organization (IMO), 2010. <u>Manual on Oil Spill Risk Evaluation and Assessment of Response Preparedness</u>. IMO Publication 1579E. IMO London.</i>” ▪ The AMSA publication <i><u>Technical Guidelines for the Preparation of Marine Pollution Contingency Plans for Marine & Coastal Facilities</u></i> should also be used as a guide. ▪ Given the focus of the EPBC Approval Conditions on protection of listed | <ul style="list-style-type: none"> • As identified above, the section provides management and response arrangements which are consistent with State and National Plans. Spill Management in Weipa will be completed under Port of Weipa First Strike Oil Spill Response Plan (MSQ 2015), while detailed oil spill response plan for the Boyd Port will be completed by the dredge and marine contractors based on the risks for their activities and associated vessels. • As noted above, the oil spill response plan for Weipa is completed by MSQ and includes a threat assessment and possible spill scenarios. MSQ will update and amend based on the increased traffic if necessary. The oil spill response plan for Boyd Port will include potential spill scenarios and a risk assessment based on the activities being completed. The oil spill response plan will be completed using the AMSA publication <i>Technical Guidelines for the Preparation of Marine Pollution Contingency Plans for Marine & Coastal Facilities</i> as a guide. This Plan will be reviewed by RTAW and MSQ and amended as required. As stated by the reviewer in Section 4, RTA has conducted vessel operations for decades without incident. Similarly, implementation of these same management approaches at Boyd Port will deliver high levels of environmental protection. • Wording amended to reference the IMO document in Section 6.4.4. • DEHP are responsible for all wildlife matters during a marine pollution event and have a system of |

| Section of Plan | Review Comment | RTA Response |
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| | marine species, the SoE Construction Phase Oil Spill Preparedness & Response Plan should include as a sub-plan, an <u>Oiled Wildlife Plan</u> , that is consistent with AMSA's " <u>National Guidelines for Development of Oiled Wildlife Response Contingency Plans</u> " and AMOSC's oiled wildlife guidance. | contingency plans, trained staff and equipment to respond. DEHP have indicated it is not necessary or encouraged for RTAW to have a wildlife response plan. |
| 6.4.3 Spill response in the port of Weipa | <ul style="list-style-type: none"> As above | As above |
| 6.4.4 Spill response in the Boyd area | <ul style="list-style-type: none"> As above | As above |
| 6.4.5 Spill response outside the port of Weipa and Boyd Ares | <ul style="list-style-type: none"> As above. Only references QCCP. Spills outside 3nm will be responded to under National Plan. Spills in GBR Region will be responded to under REEFPLAN. Need to include. | As above Text in Section 6.4.5 amended to include REEFPLAN and NATPLAN |
| 6.4.6 Shipboard Oil Pollution Emergency Plan (SOPEP) | <ul style="list-style-type: none"> Important 1st response from vessels | Noted |
| 6.4.7 Marine Pollution Reporting (POLREP) | <ul style="list-style-type: none"> Only references Qld reporting requirements. AMSA also has mandatory reporting requirements – need to include. | Text amended for reporting for spills outside QLD water - Section 6.4.7 |
| 6.5 Vessel | <ul style="list-style-type: none"> Some improvement is required – list of measures is incomplete. Should explicitly reference compliance with the maritime regulatory regime | Section 6.5 states all vessels will be contractually |

| Section of Plan | Review Comment | RTA Response |
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| Traffic Management | <p>summarized in Appendices A & B of the Plan.</p> <ul style="list-style-type: none"> Should include explicit reference to MSQ's compulsory port pilotage requirements and AMSA's compulsory coastal pilotage requirements, and also mandatory requirements for vessel reporting to Port VTS and to Reef VTS, including listing the typed and sizes of vessels that these provisions apply to. | <p><i>required to comply with all relevant legislation and operate safely and use authorised shipping routes for all travel.</i> This includes all compulsory pilotage. The plan will not state just appendices A and B to account for amendments or new legislation.</p> |
| 6.6 Vessel Strike Management | <ul style="list-style-type: none"> No improvements recommended. Strong section. | Noted |
| 6.7 Marine Pest Prevention & Response | <ul style="list-style-type: none"> Some improvements recommended. This is perhaps the most important area where the plan needs be as stringent as possible in incorporating and implementing best practices to PREVENT potential marine pest introductions during the construction phase. The introduction of marine pests via ships ballast water and biofouling can cause significant and often irreversible ecological, socioeconomic and even public health impacts - depending on the pest species. The potential introduction of marine pests to the Port of Weipa and to the Boyd Point area via construction shipping is a serious concern requiring a comprehensive management plan to address. The Boyd Point port is a near-pristine green-field site that has never been exposed to marine pest inoculation vectors. Any introductions to the site, either during the construction or operational phases, have the potential to spread to other areas in the sensitive Gulf of Carpentaria, both naturally via currents and via transshipping. It is therefore necessary to make every effort to PREVENT the Boyd Point port becoming a point of entry for marine pests. Annex 2 to this Review contains a recommended re-wording of section 6.7 in order to tighten up this aspect of the Plan. | <ul style="list-style-type: none"> RTAW agree that pest introduction must be prevented and the marine pest management methods proposed are strict to minimise the risk of incursion. RTAW does not believe the rewording provided by the Reviewer in Annex 2 of his Review is required, see detailed response below at Section 6.7.2 |
| 6.7.1 Ballast Water | <ul style="list-style-type: none"> No improvements recommended. Ballast is not considered to be a significant issue the construction phase. The stated requirement for ballasted ships to comply with the Quarantine At and where they have shipboard treatment system with the IMO BWM | <p>The management methods in Section 6.7.3 of the Reviewers Annex 2 are consistent with Section 6.7.1 of</p> |

| Section of Plan | Review Comment | RTA Response |
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| Management | <p>Convention is entirely adequate.</p> <ul style="list-style-type: none"> Annex 2 to this Review which contains a recommended re-wording of section 6.7 includes this sub-section. | <p>the Plan and no rewording is required.</p> <p>Additional text added (shown in italics) to the :</p> <ul style="list-style-type: none"> 1st paragraph - <i>Ballast water management in Australia is detailed in Seaports Program: Australian Ballast Water Management Requirements (Commonwealth of Australia, 2013 or latest version).</i> End of second dot point "if the vessel has an on-board ballast water treatment system, with the treatment requirements of the IMO BWM Convention, <i>where approved by the Quarantine Act</i>" |
| 6.7.2 Biofouling Management | <ul style="list-style-type: none"> Some improvements recommended. With regard to the biofouling vector, the types of vessels used during construction, including landing craft, self-propelled barges, dumb barges, crane barges, jack-up barges, tugs and support craft, can constitute a high risk, as they are generally slow moving, can spend long periods of time relatively stationary in ports, accumulating biofouling, and they may be sourced from high risk areas such as South East Asia and other tropical ports in Australia (Queensland East coast, Northern Territory or Northern Western Australia), where there have been outbreaks of marine pest species of concern (e.g. the Asian green mussel (<i>Perna viridis</i>) and Asian bag mussel (<i>Musculista senhousia</i>) in Cairns and the black-striped mussel (<i>Mytilopsis salleri</i>) in a Darwin marina in 1999). Section 6.7.2 addresses biofouling through a risk-based approach to be applied to construction vessels on a case-by-case basis. This approach is fundamentally sound and strongly supported by this Reviewer, however it is clumsily worded and has a number of gaps, uncertainties and ambiguities which may result in deficiencies and a failure to prevent marine pest introductions via biofouling during the construction phase. This aspect needs tightening to remove gaps, u certainties and ambiguities. This section of the Plan states that the measures proposed are consistent with previous assessment methods completed for Queensland projects | <p>Section 6.7 identifies that vessels associated with construction have a higher biofouling risk due to the type of activities and locations they operate. RTAW disagree that the Australian ports identified are a higher risk. Marine pest species of concern in these ports are concluded to have been eradicated as there have not been recorded outbreaks or identifications in these areas. Vessels have safely moved from these locations since the quarantine has been lifted without spreading any species of concern to other areas.</p> <p>RTAW disagree with the recommendations in the Reviewer's Annex 2 to remove the case by case risk assessment. Applying an overall restriction for all vessels north of the Tropic of Capricorn is not justified. This approach does not accommodate aspects such as how recent vessels were cleaned, time spent out of the water in dry dock or the planned activities of the vessel. For example, the reviewer's suggested approach would result in a vessel that has been out of the water for 3 months in Cairns being considered a high risk and therefore must be inspected. All assessments will be made by a qualified marine biologist with experience in marine pests. This will appropriately manage risk. Some rewording has been completed in Section 6.7.2 and the flow diagram included - Figure 8.</p> |

| Section of Plan | Review Comment | RTA Response |
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| | <p>(BMA 2014) – however that reference is for Hay Point which is a long-established major port that has been receiving large ships and which has undergone several major expansion construction projects over several decades. The same applies to other major east coast port expansions such as Gladstoner – compared to Boyd Point which is a near-pristine greenfield site that could become a new marine pest inoculation entry point for the Gulf of Carpentaria.</p> <ul style="list-style-type: none"> ▪ It is necessary to apply truly “Best Practices” to biofouling management at Boyd Point and these are provided by: <ul style="list-style-type: none"> ○ <i>IMO 2012 - International Maritime Organization (IMO) Guidelines for the Control & Management of Ships’ Biofouling to Minimize the Transfer of Invasive Aquatic Species, IMO Publication 1662E.</i> ○ <i>Commonwealth of Australia, 2009. National Biofouling Management Guidelines for Non-Trading Vessels.</i> ○ <i>Commonwealth of Australia, 2008. National Biofouling Management Guidelines for Commercial Vessels.</i> • A central tenant of these Best Practice guidelines is that highest priority should be given to PREVENTING the introduction of pest species to the project site by addressing risks as close to their source ports as possible, and should be based on the principle of ‘layered defense’, with management arrangements organized along established world’s best practice in the fields of bio-security and quarantine, as follows: <ul style="list-style-type: none"> ○ Pre-border (incursion prevention) ○ At-Border (incursion interdiction) ○ Post-border (incursion response, control and mitigation) ▪ Annex 2 to this Review contains a recommended re-wording of section 6.7 in order to tighten up this aspect of the Plan and to remove uncertainties | <p>RTA believes the Hay Point case is a very relevant example of successful marine pest management. Hay Point is an established major port and the management methods implemented have resulted in no marine pest incursions which demonstrate the management methods implemented are effective. Additionally, the port in question lies within the GBRWHA and has operations within the GBRMP. These areas are of exceptionally high conservation value and it is necessary to prevent any incursion into any of these areas.</p> <p>The methods outlined in the CMSMP are aligned with industry practice and the methods are consistent with these documents and the reviewed Australian biofouling management requirements. The additional measures outlined by the reviewer in Annex 2 are not identified as best practice in any document or consistent with any requirement and are not practicable for implementation.</p> <p>The current management are aimed at preventing marine pests incursions with risk assessments or associated inspections occurring “prior to mobilisation” with a layered defence system.</p> <ul style="list-style-type: none"> • Pre border – risk assessments and inspections • At border – marine pest monitoring in addition to incidental observations by staff members working in these areas • Post-border – the emergency pest response will be managed by the relevant government authorities who have experience and training in response requirements. All contracted vessels will comply with requests from regulatory authorities and RTAW will work with the authorities as necessary or requested. The |

| Section of Plan | Review Comment | RTA Response |
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| | <p>and ambiguities in the current wording. The main tightening is a recommendation that:</p> <ul style="list-style-type: none"> ○ All vessels rated above low risk will be required to undergo a <u>physical marine pest inspection</u> by personnel with qualifications and experience in marine pest identification, either by diving or drop cameras, and be certified as being free of biofouling, according to set criteria, prior to mobilisation to site / entry to site. ○ All vessels and marine plant and equipment that are sourced from other tropical Australian ports (north of Tropic of Capricorn) or any port in South East Asia, <u>will automatically be considered to be potentially high risk</u>, and will be required to undergo a physical marine pest inspection by personnel with qualifications and experience in marine pest identification, either by diving or drop cameras, and be certified as being free of biofouling, according to set criteria, prior to mobilisation to site / entry to site. | <p>following sentence has been added in Section 6.7.2: <i>“if marine pests are recorded in an area the project will implement the management measures recommended by responding government departments (e.g. DAF) and Emergency Response Teams (e.g. investigation and eradication)”</i></p> <p>RTAW disagree it is necessary for all vessels above a low risk to be inspected. Operational time restrictions (less than 48 hours) and vessel stand offs have also been used effectively. This is pertinent to heavy lift or cargo vessels. Additionally the Reviewer has recommended only in-water inspection when out of water inspections, as included in this Plan, would be more effective</p> <p>As previously discussed, RTAW disagree that all vessels sourced from north of the Tropic of Capricorn or South East Asia should be considered high risk. The methods proposed by RTAW are considered more effective with the reviewer’s recommended approach having limitations resulting in unnecessary costs or may result in an incursion, such as:</p> <ul style="list-style-type: none"> • It disregards the vessels recent cleaning, internal seawater system treatment or time spent out of the water or the planned activities of the vessel. For example, a vessel in Cairns that has been out of the water for two months, cleaned, antifouled, has a recent internal seawater system treatment using effective methods and departing to site within 7 days of re-floating would require an inspection. However, in this scenario this vessel would be low risk with all marine biofouling desiccated (growth is considered to desiccate within 7 days). |

| Section of Plan | Review Comment | RTA Response |
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| | <ul style="list-style-type: none"> ○ Vessels found to have biofouling above the set criteria will be required to implement additional management measures such as hull and niche space cleaning and seawater systems treatment, and be re-inspected and certified prior to mobilisation to site / entry to site. • The supplementary marine Biosecurity Management Plan should be independently reviewed once drafted. | <ul style="list-style-type: none"> • The reviewer recommended that methods of inspection be restricted to in-water inspections that may miss marine pest species of concern. By comparison, out of water inspections would be more effective, enabling access to all areas of the vessel that may otherwise go undetected. In-water inspections disregard the ability of biofouling growth to attach to stationary vessels in tropical conditions within 7 days². <i>Perna Viridis</i> (Asian green mussel) has a growth rate of 6-10 mm per month³ and can reproduce at 2-3 months of age. An in-water inspection at 2 weeks after re-floating may record no visible presence of IMS; however they may be present on the vessel, posing a risk to the marine environment. • Based on the time in the water and vessel activities (stationary or moving), a marine biologist with experience in marine pest risk assessments can assess whether biofouling on the vessel is likely to be above an acceptable criteria and if internal seawater system treatment is necessary and make recommendation accordingly. They can advise without the use of in water inspection. • RTAW do not agree a supplementary biosecurity management plan is necessary. The management methods to be implemented are clearly outlined in the CMSMP. |
| 6.7.3 Marine Pest Surveys & Monitoring | <ul style="list-style-type: none"> ▪ Refer 8.2 below. ▪ Annex 2 to this Review which contains a recommended re-wording of section 6.7 includes this sub-section. | The annex 2 version and current version are identical and no rewording is necessary |

² NIWA (2010) Temporal Development of Biofouling Assemblages, Prepared for the Department of Agriculture, Fisheries and Forestry

³ Soon TK and Ransangan (2014) A Review of Feeding Behavior, Growth, Reproduction and Aquaculture Site Selection for Green-Lipped Mussel *Perna Viridis*, *Advances in Bioscience and Biotechnology* Vol 5 (462-469)

| Section of Plan | Review Comment | RTA Response |
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| 6.8 Lighting Management | <ul style="list-style-type: none"> No improvements recommended. | Noted |
| 6.9 Summary of Management Measures | <ul style="list-style-type: none"> All comments on all issues above apply in full to the Tables in section 6.9 and these need to be updated accordingly. | Minor edits as required |
| 7. Action Plans | <ul style="list-style-type: none"> All comments on all issues above apply in full to the Action Plans and these need to be updated accordingly. | Minor edits as required |
| 8. Monitoring & Reporting | <ul style="list-style-type: none"> See below. | |
| 8.1 Piling Observation Zone Monitoring | <ul style="list-style-type: none"> No specific comments – derived directly from and complies with relevant Approval Condition. | Noted |
| 8.2 Marine Pest Monitoring | <ul style="list-style-type: none"> No specific comments – derived directly from and complies with relevant Approval Condition. | Noted |
| 8.3 Marine Turtle Nest Surveys | <ul style="list-style-type: none"> No specific comments – derived directly from and complies with relevant Approval Condition. | Noted |
| 8.4 Elasmobranch Sightings | <ul style="list-style-type: none"> No specific comments. | Noted |
| 8.5 Foreshore Access Permit System | <ul style="list-style-type: none"> No specific comments – derived directly from and complies with relevant Approval Condition, although this is a <u>management measure</u> to protect marine turtles not a Monitoring and Reporting program under section 8. | The foreshore access permit system will be used to monitor beach use. |

| Section of Plan | Review Comment | RTA Response |
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| 8.6 Feral Pig Management Offset Strategy | <ul style="list-style-type: none"> Strongly supported although this is an <u>offset strategy</u> for marine turtles not a <u>Monitoring and Reporting</u> program under section 8. | This strategy does include monitoring and reporting and is a monitoring program. |
| 8.7 Inshore Dolphin Offset Strategy | <ul style="list-style-type: none"> No specific comments – work will provide very useful data. | Noted |
| 8.8 Other Reporting | <ul style="list-style-type: none"> No specific comments. Includes measures to address conditions 66 to 72 of EPBC Approval. | Noted |
| Missing Monitoring | <ul style="list-style-type: none"> The Plan includes management actions to address potential beach erosion in Table 4 of section 6.9, including a commitment to monitor coastal processes and beach erosion and to take remedial action if necessary. However, there is no corresponding Coastal Process & Beach Erosion Monitoring program included in section 8 of the Plan – this needs to be added. | Text added – New Section 8.8 Beach Erosion Monitoring: Monthly visual inspections for beach erosion will occur when completing the monthly visual inspection for the Temporary Barge Facility |
| 9. Traditional Owner Employment Opportunities | <ul style="list-style-type: none"> No specific comments. Well developed and based on long history of productive engagement between RTA and TOs. | Noted |
| 10. Traditional Owner Consultation | <ul style="list-style-type: none"> No specific comments. Well developed and based on long history of productive engagement between RTA and TOs. | Noted |

2.2 Review Against Review Criteria

1. The Plan was reviewed against the approved Review Criteria and review comments are presented in Table 2. Assessment of the Plan against the Review Criteria is very much based on the general review of each section of the Plan as presented in section 2.1 and Table 1 above, and these should be referred to where indicated.
2. ***Overall the Plan is found to comprehensively and thoroughly address the Review Criteria, subject to incorporating the improvements recommended in section 2.1 of this Review, and some other minor recommendations on specific Review Criteria as outlined in Table 2 below.***

TABLE 2: Review of Construction Marine & Shipping Management Plan against approved Review Criteria

| Review Criteria | | Independent Review Comments | RTA Response |
|-----------------|--|--|---|
| 1. | The Construction Marine and Shipping Management Plan: | | |
| 1.1 | <i>incorporates avoidance and mitigation measures for impacts identified under section 2 below from marine construction activities, shipping activities, and recreational activities associated with construction of the SoE Project on the:</i> | | |
| | <ul style="list-style-type: none"> <i>outstanding universal values of the Great Barrier Reef World Heritage Property,</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section 2.1 of this Review. | The review comments in Section 2.1 do not require any amendments in regards to the Outstanding Universal Values of the GBRWHA and as such, the plan comprehensively and thoroughly addresses the review criteria. |
| | <ul style="list-style-type: none"> <i>Great Barrier Reef National Heritage Place,</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section 2.1 of this Review. | The review comments in Section 2.1 do not require any amendments in regards to the GBRNHP and as such the plan comprehensively and thoroughly addresses the review criteria. |
| | <ul style="list-style-type: none"> <i>Great Barrier Reef Marine Park,</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section 2.1 of this Review. | The review comments in Section 2.1 do not require any amendments in regards to the GBRMP and as such the plan comprehensively and thoroughly addresses the review criteria. |

| Review Criteria | Independent Review Comments | RTA Response |
|---|--|--|
| <ul style="list-style-type: none"> <i>listed turtle species, listed dolphin species, Dugong and Bryde's Whale;</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section 2.1 of this Review. | <p>Waste Management – The reviewers' interpretation that waste facilities will not be provided is incorrect. The text has been reworded to make clear that waste services will be provided for all vessel waste excluding quarantine material (NQBP 2012, Port Handbook Port of Weipa) and the proposed management measures are consistent with standard practice where facilities are not available. Waste management is detailed in the CMSMP and accordingly RTAW do not agree that a Ships Waste Reception and Management Plan, as recommended by the reviewer, is necessary. Minor text amendments were completed in Section 6.3.1 to avoid any misinterpretation.</p> <p>Spill Management - The reviewer identified the information pertaining to oil spill management and response arrangements were comprehensive and consistent with relevant state and National Plans.</p> <ul style="list-style-type: none"> The reviewer additionally requested a spill risk assessment and likely scenarios be completed. This information has/is to be included with the local spill response plan (Weipa or Boyd Port) which will be developed in accordance with national and IMO guidelines and in collaboration with MSQ, where necessary. The reviewer requested an Oiled Wildlife Plan be developed. However, DEHP are responsible for all wildlife matters during a marine pollution event and have a system of contingency plans, trained staff and equipment to respond. DEHP have indicated it is not necessary or encouraged for RTAW to have a wildlife response plan. <p>Marine Pests - The reviewer provided a recommended rewording of Section 6.7 to address what he viewed as necessary</p> |

| Review Criteria | Independent Review Comments | RTA Response |
|-----------------|-----------------------------|---|
| | | <p>additional marine pest management measures. The majority of the suggested rewording is already in the Plan. It also includes unnecessary information, omitted key information, does not use current practice measures, is not practicable for implementation and restricts methods to those which increase the risk of incursions. Therefore RTAW has not accepted the reviewer's rewording of Section 6.7. However, a number of amendments have been made to address the reviewer's comments:</p> <p>Section 6.7.1 Ballast water management</p> <ul style="list-style-type: none"> Minor amendment to include Australian ballast water requirements primary documents and use of on-board ballast water treatment where approved by Quarantine Act (1908). <p>Section 6.7.2 Biofouling management</p> <ul style="list-style-type: none"> The methods proposed by RTA for biofouling management are consistent with National Guidance documents and has been implemented successfully in Western Australia and in Queensland and RTAW disagree with the amendments proposed by the reviewer as detailed above in Table 1 in response to the reviewer's comments on Section 6.7.2. As discussed previously, RTAW disagree with the recommendation to automatically rate vessels north of the Tropic of Capricorn as high risk regardless of recent cleaning or time out of the water. The risk assessment practice is current practice and a clear outline of the process has been included as a flow diagram to provide further clarification and is consistent with National Guidance documents (Section 6.7.2 Figure 8). RTAW have proposed out of water inspections and cleaning, when necessary, which is a more reliable and robust approach than the in water inspection methods |

| Review Criteria | | Independent Review Comments | RTA Response |
|-----------------|---|--|---|
| | | | <p>recommended by the Reviewer.</p> <ul style="list-style-type: none"> RTAW do not agree a supplementary biosecurity management plan is necessary with management methods to be implemented clearly outlined in the CMSMP. |
| 1.2 | <i>includes and addresses effective management strategies to mitigate each potential impact, desired outcomes, benchmarks, readily measureable performance indicators and goals, timeframes for implementation and reporting, corrective actions and contingency measures, and specify the persons/ roles with responsibility for implementing actions;</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section 2.1 of this Review. | No amendments were required as a result of the recommendations of the reviewer |
| 1.3 | <i>includes measures to ensure construction shipping activities are undertaken in accordance with the current version of the Great Barrier Reef Marine Park Zoning Plan (2003);</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, without further improvement. | Noted |
| 1.4 | <i>includes a marine pest monitoring program that is consistent with the Department of Agriculture, Fisheries and Forestry's Australian Marine Pest Monitoring Manual (version 2.0), or its most current version;</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, without further improvement. | Noted |

| Review Criteria | | Independent Review Comments | RTA Response |
|-----------------|---|---|--|
| 1.5 | <i>includes mechanisms to notify the Department of Environment in writing within five (5) business days of any confirmed or suspected sighting/s and/or observation/s in the marine environment in and/or around the SoE project area of the Dwarf Sawfish; Green Sawfish; Freshwater Sawfish; or the Speartooth Shark;</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, without further improvement. | Noted |
| 1.6 | <i>includes adaptive management strategies that benefit listed turtle species, listed dolphin species, Dugong and Bryde's Whale;</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section 2.1 of this Review. | The reviewer did not recommend any adaptive management strategies in Section 2.1 and as such no amendments have been made. |
| 1.7 | <i>is consistent with relevant management measures contained in relevant threat abatement plans published by the Department of Environment;</i> | <ul style="list-style-type: none"> Of the 14 threat abatement plans that have been approved by DoE (www.environment.gov.au/biodiversity/threatened/threat-abatement-plans/approved), only two are directly relevant in this context: <ul style="list-style-type: none"> Threat abatement plan for <u>predation, habitat degradation, competition and disease transmission by feral pigs</u> (www.environment.gov.au/system/files/resources/eddf958-49e0-4c11-a994-68b113724b3a/files/feral-pig-tap.pdf) | Noted |

| Review Criteria | | Independent Review Comments | RTA Response |
|-----------------|---|---|--------------|
| | | <ul style="list-style-type: none"> ○ <u>Threat abatement plan for the impacts of marine debris on vertebrate marine life</u> (www.environment.gov.au/biodiversity/threatened/publications/tap/marine-debris.html) • The Plan is found to be fully consistent with the Threat abatement plan for feral pigs, in that a Feral Pig Control Program to reduce predation on turtle nests around the Project site is included as a major environmental offset. • The Plan includes a commitment by RTA to conduct marine debris cleanups in the Project Area, and is therefore consistent with the second Threat abatement plan. | |
| 1.8 | <i>details Traditional Owner employment opportunities, and mechanisms for reporting the number of local indigenous person/s actually employed in the implementation of the Construction Marine and Shipping Management Plan (as per EPBC Approval Condition 42); and,</i> | <ul style="list-style-type: none"> • The Plan is found to comprehensively and thoroughly address this Review Criteria, without further improvement. | Noted |
| 1.9 | <i>adequately identifies publication requirements as per EPBC approval condition 59.</i> | <ul style="list-style-type: none"> • The Plan is found to comprehensively and thoroughly address this Review Criteria, without further improvement. | Noted |

| Review Criteria | | Independent Review Comments | RTA Response |
|-----------------|--|--|---|
| 2. | The Plan includes mitigation measures for impacts associated with construction activities (including construction shipping) for the following: | | |
| 2.1 | <i>the marine environment that supports listed turtle species; listed dolphin species; Dugong and Bryde's Whale traversing, foraging and/or breeding habitat including, seagrass, reefs and corals, listed turtle species nesting and/or foraging habitat;</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section 2.1 of this Review. | <p>Waste Management – The reviewers' interpretation that waste facilities will not be provided is incorrect. The text has been reworded to make clear that waste services will be provided for all vessel waste excluding quarantine material (NQBP 2012, Port Handbook Port of Weipa) and the proposed management measures are consistent with standard practice where facilities are not available. Waste management is detailed in the CMSMP and accordingly RTAW do not agree that a Ships Waste Reception and Management Plan, as recommended by the Reviewer, is necessary. Minor text amendments were completed in Section 6.3.1 to avoid any misinterpretation.</p> <p>Spill Management - The reviewer identified the information pertaining to oil spill management and response arrangements were comprehensive and consistent with relevant state and National Plans.</p> <ul style="list-style-type: none"> The reviewer additionally requested a spill risk assessment and likely scenarios be completed. This information has/is to be included with the local spill response plan (Weipa or Boyd Port) which will be developed in accordance with national and IMO guidelines and in collaboration with MSQ, where necessary. The reviewer requested an Oiled Wildlife Plan be developed however, DEHP are responsible for all wildlife matters during a marine pollution event and have a system of contingency |

| Review Criteria | | Independent Review Comments | RTA Response |
|-----------------|--|-----------------------------|---|
| | | | plans, trained staff and equipment to respond. DEHP have indicated it is not necessary or encouraged for RTAW to have a wildlife response plan |
| | | | <p>Marine Pests - The reviewer provided a recommended rewording of Section 6.7 to address what he viewed as necessary additional marine pest management measures. The majority of the suggested rewording is already in the Plan. It also includes unnecessary information, omitted key information, does not use current practice measures, is not practicable for implementation and restricts methods to those which increase the risk of incursions. Therefore RTAW has not accepted the reviewer's rewording of Section 6.7. However, a number of amendments have been made to address the reviewer's comments:</p> <p>Section 6.7.1 Ballast water management</p> <ul style="list-style-type: none"> Minor amendment to include Australian ballast water requirements, primary documents and use of on-board ballast water treatment where approved by Quarantine Act (1908). <p>Section 6.7.2 Biofouling management</p> <ul style="list-style-type: none"> The methods proposed by RTA for biofouling management are consistent with National Guidance documents and has been implemented successfully in Western Australia and in Queensland and RTAW disagree with the amendments proposed by the independent reviewer as detailed above in Table 1 in response to the reviewer's comments on Section 6.7.2. RTAW disagree with the recommendation to automatically rate vessels north of the Tropic of Capricorn as high risk regardless of recent cleaning or time out of the water. The |

| Review Criteria | | Independent Review Comments | RTA Response |
|-----------------|---|--|--|
| | | | <p>risk assessment practice is current practice and a clear outline of the process has been included as a flow diagram to provide further clarification and is consistent with National Guidance documents (Section 6.7.2 Figure 8).</p> <ul style="list-style-type: none"> RTAW have proposed out of water inspections and cleaning, when necessary, which is a more reliable and robust approach than the in water inspection methods recommended by the Reviewer. RTAW do not agree a supplementary biosecurity management plan is necessary with management methods to be implemented clearly outlined in the CMSMP. |
| 2.2 | <i>changes to coastal processes, including beach and/or shore erosion from the Boyd Port development, barge facilities and/or ferry facilities and ensure construction activities do not alter the beach gradients to such an extent that listed turtle species are prevented from and/or impeded in accessing the beach foreshore to nest or listed turtle species hatchlings are prevented and/or impeded from entering the marine environment;</i> | <ul style="list-style-type: none"> The Plan is found to address this Review Criteria, with management actions in Table 4 of section 6.9 including a commitment to monitor coastal processes and beach erosion and to take remedial action if necessary. However, there is no corresponding Coastal Process & Beach Erosion Monitoring program included in section 8 of the Plan – this needs to be added. | Beach Erosion monitoring section has been added as a new Section 8.8. |
| 2.3 | <i>artificial light related impacts on listed turtle species (including hatchlings) nesting beaches and adjacent marine environment including, but not limited to, lighting</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, without further improvement. | Noted |

| Review Criteria | | Independent Review Comments | RTA Response |
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| | <i>from Boyd Port construction and operation, shipping, temporary passenger landing and barge facility between Pera Head and Boyd Bay, and anchored/moored vessels (but excludes operations within the Hey and Embley Rivers);</i> | | |
| 2.4 | <i>impacts from vessel strike to listed turtle species, listed dolphin species or Dugongs including, but not limited to, restricting vessel speed limits to 6 knots in water depths of 2.5 metres or less; and, implementation of a transit lane in the Hey River and Embley River that follows the greatest water depths;</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, without further improvement. | Noted |
| 2.5 | <i>impacts from underwater noise including, but not limited to, pile driving activities and shipping;</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria. However, there is a need to reassess the proposal to allow pile driving that has commenced before sunset or periods of low viz to continue after sunset or into periods of low viz. It is recommended that there should be no pile driving during such periods, regardless of when they start – as presence of sensitive wildlife cannot be | <p>This is consistent with approval condition 12f and taken directly from the approval conditions. Accordingly no change has been made.</p> <p>Marine fauna in this area will avoid the area surrounding piling activities due to noise levels (Brandt et al 2011).</p> |

| Review Criteria | | Independent Review Comments | RTA Response |
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| | | observed during such periods. | |
| 2.6 | <i>impacts associated with recreational use by project employees of listed turtle species nesting habitat (including, but not limited to, implementation of a permit access system for the employees);</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, without further improvement. | Noted |
| 2.7 | <i>impacts identified in the Environmental Management Plan Outlines at:</i> | | |
| | <ul style="list-style-type: none"> <i>Appendix 7-E (Threatened estuarine and Marine species),</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section 2.1 of this Review. | Response same as in Review Criteria 2.1 above |
| | <ul style="list-style-type: none"> <i>Appendix 9-A (Non-avian Migratory Species),</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section 2.1 of this Review. | Response same as in Review Criteria 2.1 above |
| | <ul style="list-style-type: none"> <i>Appendix 11-A (Great Barrier Reef Marine Park, World Heritage Area and National Heritage Place); and</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section | The review comments in Section 2.1 do not require any amendments in regards to the GBRMP, GBRWHA and GBRNHP and as such the plan comprehensively and thoroughly addresses the review criteria. |

| Review Criteria | | Independent Review Comments | RTA Response |
|-----------------|--|---|--|
| | | 2.1 of this Review. | |
| | <ul style="list-style-type: none"> Appendix 10- A (Commonwealth Marine Area); | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section 2.1 of this Review. | The review comments in Section 2.1 do not require any amendments in regards to the Commonwealth Marine Area and as such the plan comprehensively and thoroughly addresses the review criteria. |
| | in the SoE Project Final Environmental Impact Statement submitted to the Commonwealth in March 2013; | | |
| 2.8 | mechanisms to implement best practice mitigation and management measures for ship loading and unloading, and all other aspects of shipping activities to minimise impacts on the marine environment (including contamination spills); and, | <ul style="list-style-type: none"> Ship loading and unloading (for construction phase) are not explicitly addressed in the Plan and this needs to be added, including appropriate management measures. Otherwise the Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section 2.1 of this Review, esp re. oil spill preparedness and response and ships waste reception and management. | Ship loading and unloading is addressed in spill management (Section 6.4). |
| | | | Waste Management – The reviewers interpretation that waste facilities will not be provided is incorrect. The text has been reworded to make clear that waste services will be provided for all vessel waste excluding quarantine material (NQBP 2012) and the proposed management measures are consistent with standard practice where facilities are not available. Waste management is detailed in the CMSMP and accordingly RTAW do not believe a Ships Waste Reception and Management Plan is necessary. Minor text amendments were completed in Section 6.3.1 to avoid any misinterpretation. |
| | | | Spill Management - The reviewer identified the information pertaining to oil spill management and response arrangements were comprehensive and consistent with relevant state and National Plans. |

| Review Criteria | | Independent Review Comments | RTA Response |
|-----------------|---|--|--|
| | | | <ul style="list-style-type: none"> The reviewer additionally requested a spill risk assessment and likely scenarios be completed. This information has/is to be included with the local spill response plan (Weipa or Boyd Port) which will be developed in accordance with national and IMO guidelines and in collaboration with MSQ, where necessary. The reviewer requested an Oiled Wildlife Plan be developed, however DEHP are responsible for all wildlife matters during a marine pollution event and have a system of contingency plans, trained staff and equipment to respond. DEHP have indicated it is not necessary or encouraged for RTAW to have a wildlife response plan. |
| 2.9 | <i>measures that minimise the risk of introduced marine pest species, including ballast water management.</i> | <ul style="list-style-type: none"> The Plan is found to comprehensively and thoroughly address this Review Criteria, subject to incorporating the improvements recommended in section 2.1 and Annex 2 of this Review. | As discussed in Review Criteria 2.1 above, the marine pest management methods proposed are current practise and have been effectively implemented on projects in the GBR and therefore thoroughly and comprehensively addresses the Review Criteria |

ANNEX 1: SPECS for CONSTRUCTION PHASE VESSELS

[it is recommended that this Table be completed by RTA and added to section 2.2.2 of the Plan. This information is fundamental to informing the assessment of oil spill risk and the development of an oil spill preparedness and response plan that is adequate to address such risk, and to informing the assessment of demand for vessel waste reception facilities and developing a vessel waste reception plan that is adequate to address such demand. It is also important to provide more information on vessels that will be used in the actual construction of the port and trestle jetty, such as jackup barges, crane barges, pile driving barges, barges used to carry piles and jetty components alongside the construction, supporting tugs and various other work vessels and support boats. Such vessels are the highest risk in terms of biofouling risks, are the highest likelihood of potential spills, especially during bunkering and will remain on-site for extended periods throughout the construction phase, generating the most demand for waste reception and management].

Table X: Indicative specifications for construction phase vessels (subject to variation)

| Category | Vessel Type (e.g. ship, landing craft, self-propelled barge, dumb barge, jack-up barge, tug, support vessel etc) | LOA (m) | GT (t) | Type & Volume of Fuel Carried | Type & Volume of Cargo Carried | Likely sailing from (source port or region) |
|--|---|---------|--------|-------------------------------|--------------------------------|---|
| Cargo vessels | | | | | | |
| | | | | | | |
| | | | | | | |
| [add rows as required under each category] | | | | | | |
| Tankers | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Passenger | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Construction Vessels | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Support vessels | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

ANNEX 2: SUGGESTED REVISED SECTION 6.7

[it is recommended that this replace the current wording in section 6.7 of the Plan and that a supplementary Marine Biosecurity Management Plan be developed which complies with this revised section, and that this be independently reviewed once developed]

6.7 MARINE PEST PREVENTION & RESPONSE

6.7.1 Background

The introduction of marine pests via ships ballast water and biofouling can cause significant and often irreversible ecological, socioeconomic and even public health impacts - depending on the pest species.

The potential introduction of marine pests to the Port of Weipa and to the Boyd Point area via construction shipping is a serious concern requiring a comprehensive management plan to address. The Boyd Point port is a near-pristine green-field site that has never been exposed to marine pest inoculation vectors. Any introductions to the site, either during the construction or operational phases, have the potential to spread to other areas in the sensitive Gulf of Carpentaria, both naturally via currents and via transshipping. It is therefore necessary to make every effort to PREVENT the Boyd Point port becoming a point of entry for marine pests.

The ballast water vector is not a major concern during the construction phase as vessels will arrive to Weipa or the Project site carrying cargo to supply the construction effort, and generally not carrying ballast. In fact many construction vessels such as tugs, barges and support vessels will not have ballast water tanks or will have fresh water tanks only. In cases where vessels do arrive carrying even some ballast from overseas ports, they will need undertake prevention measures as outlined under 6.6.3 below.

With regard to the biofouling vector, the types of vessels used during construction, including landing craft, self-propelled barges, dumb barges, crane barges, jack-up barges, tugs and support craft, can constitute a high risk, as they are generally slow moving, can spend long periods of time relatively stationary in ports, accumulating biofouling, and they may be sourced from high risk areas such as South East Asia and other tropical ports in Australia (Queensland East coast, Northern Territory or Northern Western Australia), where there have been outbreaks of marine pest species of concern (e.g. the Asian green mussel (*Perna viridis*) and Asian bag mussel (*Musculista senhousia*) in Cairns and the black-striped mussel (*Mytilopsis sallei*) in a Darwin marina in 1999).

6.7.2 Marine Biosecurity Management Plan

As outlined in Section 1.2 a Marine Biosecurity Management Plan for quarantine management will be developed in coordination with the Australian Quarantine Inspection Service (AQIS). This plan will develop and apply processes and protocols to manage biosecurity risks relating to ballast water management and management of biofouling on all construction vessels.

The MARINE Biosecurity Management Plan will give highest priority to PREVENTING the introduction of pest species to the project site by addressing risks as close to their source ports as possible, and will be based on the principle of 'layered defense', with management arrangements organized along established world's best practice in the fields of bio-security and quarantine, as follows:

- Pre-border (incursion prevention)
- At-Border (incursion interdiction)
- Post-border (incursion response, control and mitigation)

The Biosecurity Management Plan will include measures relating to:

- prevention of marine pest introductions via ballast water,
- prevention of marine pest introductions via biofouling; and
- marine pest surveys & monitoring; and

will be independently reviewed by a relevant expert.

6.7.3 Prevention of marine pest introductions via ballast water

As outlined above the ballast water vector is not a major concern during the construction phase however, where vessels do arrive carrying even some ballast from overseas ports, they will need to either:

- comply with the ballast water exchange requirements of the Quarantine Act; or
- if the vessel has an on-board ballast water treatment system, with the treatment requirements of the IMO BWM Convention.

6.7.4 Prevention of marine pests introductions via biofouling

As outlined above biofouling is the most significant concern during the construction phase, and will be addressed through application of relevant management measures from the following guidelines:

- Australian National Biofouling Management Guidance for Commercial Vessels,
- Australian National Biofouling Management Guidance for Non-trading Vessels; and
- IMO Guidelines on the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species (MEPC 62/24/Add.1 Annex 26).

Accordingly, biofouling management measures that will be applied to all construction vessels, including all marine plant and equipment and submersible equipment (e.g.

moorings), vessels coming from overseas ports and vessels coming from other Australian ports outside of Weipa, include:

- Ensuring the application, maintenance and certification of antifouling coatings on all wet surfaces (including in niche areas),
- Undertaking a biofouling risk assessment of each vessel / item of marine plant and equipment at its source port prior to mobilisation to site. A detailed procedure will be developed for these risk assessments, and will consider:
 - the vessel type,
 - cleaning and marine pest inspection history,
 - the presence, age and suitability of antifouling coating,
 - the type and treatment history of internal seawater systems,
 - previous areas of operation (including climatic region and the presence of marine pests of concern) since the last documented cleaning and/or marine pest inspection, the duration the vessel spent in those areas,
 - the nature of previous vessel operations,
 - any periods spent out of water immediately prior to mobilisation.
- All vessels rated above low risk will be required to undergo a physical marine pest inspection by personnel with qualifications and experience in marine pest identification, either by diving or drop cameras, and be certified as being free of biofouling, according to set criteria, prior to mobilisation to site / entry to site.
- All vessels and marine plant and equipment that are sourced from other tropical Australian ports (north of Tropic of Capricorn) or any port in South East Asia, will automatically be considered to be potentially high risk, and will be required to undergo a physical marine pest inspection by personnel with qualifications and experience in marine pest identification, either by diving or drop cameras, and be certified as being free of biofouling, according to set criteria, prior to mobilisation to site / entry to site.
- Vessels found to have biofouling above the set criteria will be required to implement additional management measures such as hull and niche space cleaning and seawater systems treatment, and be re-inspected and certified prior to mobilisation to site / entry to site.
- Vessel contractors will be contractually required to provide the documentation and information necessary to conduct the risk assessment.
- In-water cleaning of construction vessels will be prohibited while the vessel is under contract, in accordance with the Australian Anti-fouling and In-water Cleaning Guidelines (DAFF and SEWPaC, 2013). This reduces the risk that marine pests will be physically released from the vessel into the environment in the event that the vessel does harbour undetected marine pests.

6.7.5 Marine pest surveys & monitoring

Marine pest monitoring will be conducted before, during and after construction as described in Section 8.2. Should a marine pest listed on the CCIMPE Trigger List of marine pest species be detected, the Project will notify DAFF and the Queensland Department of Agriculture and Fisheries (DAF) as soon as practicable. Relevant government agencies will then initiate a response in accordance with the Australian Emergency Marine Pest Plan (EMP Plan) Control Centre Management Manual (DAFF, 2006). All contracted vessels will be required to comply with requests from the regulatory authorities implementing the emergency marine pest response.