

Amrun port and river facilities: long-term maintenance dredge management plan

Amrun | Independent Peer Review

Attn: Glenn Woodrow

Principal Advisor – Environment

Rio Tinto

Dear Glenn,

Long-Term Maintenance Dredge Management Plan – Amrun Port and River Facilities

Close Out of Peer Review

Thank you for the opportunity to provide a peer review of the Long-Term Maintenance Dredge Management Plan for the Amrun Port (the Plan). I have reviewed the responses provided to my initial review of an early draft of the Plan and am satisfied that they have dealt with the issues I raised. Based on the relatively low-risk nature of the maintenance dredging covered herein, Rev. H of the Plan provides an appropriate management document which, in my opinion, is compliant with the EPBC terms of reference and their intent.

Best Regards,



Dr James A Stoddart
CHIEF SCIENTIST

31 August 2020

Amrun Port and River Facilities Long-term Maintenance Dredge Management Plan 2021-2031 Independent Peer Review

Document Reviewed: Amrun Port and River Facilities: Long-term Maintenance Dredge Management Plan 2021 - 2031.

Version: Draft Rev. H, 31 August 2020

Independent Peer Reviewer: Dr James Stoddart
Date of Review: 31 August 2020

Scope of Review:

Condition 60 of EPBC Approval 2010/5642 requires Rio Tinto Weipa Pty Ltd (RTAW) to obtain an Independent Peer Review of certain criteria relating to their Long-term Maintenance Dredge Management Plan (LMDMP) for the Amrun Project at South Embley in northern Queensland. On 24 July 2019, RTAW obtained approval from the Department of the Environment and Energy (on behalf of the Minister for the Environment) for the terms of reference of that Independent Peer Review and for Dr James Stoddart to act as the reviewer.

This review has considered the document referenced above, supported by the following documents:

Amrun Port Maintenance Dredging - Marine Environmental Monitoring Plan; Rev.5, 5 May 2020 (the MEMP)

This document presents an Executive Summary of the Independent Peer Review findings followed by a detailed treatment of each review criterion.

Note:

The terms of reference agreed for this review are stated to be for a review of the Amrun Maintenance Dredge Management Plan (MDMP), however, the plan reviewed was the Long-term Maintenance Dredge Management Plan (LMDMP). By their nature, 'Long-term' plans provide a framework to produce specific plans for maintenance campaigns. While some of the terms of reference relate specifically to long-term plan requirements, others are more focussed on the level of detail that would be found in a specific plans for actual campaigns. In the case of these latter criteria, the review has focussed on the likelihood that the framework of the LMDMP will result in inclusion of requirements in the individual MDMPs that would be compliant with the terms of reference.

Conduct of the Review:

The review was undertaken on a desktop basis from documents supplied by RTAW and NQBP. An earlier version of the LMDMP (Rev. B) was reviewed and Rev. H has been adapted to respond to comments made on Rev. B. This review addresses only Rev.H.

The review was undertaken consistent with the EPBC Approval definitions relating peer review, stated as:

Independent/ly Peer reviewed/ Independent Peer Reviewer – assessment of the assumptions, calculations, extrapolations, alternate interpretations, methodologies, performance goals and performance criteria, and conclusions pertaining to the management plans/strategies/programs by a person/organisation/technical committee, independent of the approval holder and/or employed in any subsidiary company of the approval holder.

This person/organisation/technical committee must have demonstrated expertise in the matter of national environmental significance being reviewed and be approved by the Minister prior to commencement of the review.

Limitations of this Review:

Assessment of calculations relating to project design components as provided in the Plan, and calculations within the supporting documents have been accepted as correct. An independent assessment of the basis of these numbers would require detailed review of project documents by an expert in project engineering. This has been considered to be beyond the scope normally included for an environmentally focused Peer Review.

Findings:Assessment categories

Compliant: meets the criterion without further change;

Compliant with recommendation: item meets the criterion but could be improved;

Non-compliant: item does not meet the criterion in part or whole. (text in red)

Table 1 contains the summary findings.

Table 2 contains rationale for findings.

Overall Assessment

Based on the relatively short dredging campaigns and low volumes of spoil described within the Plan, the LMDMP Rev. H is fit for the purpose for which it is intended and compliant with the Terms of Reference provided for this Independent Peer Review.

TABLE 1: Findings of the Independent Peer Review

#	Criterion from Terms of Reference	Finding
1	identifies avoidance and mitigation measures for impacts associated with maintenance dredging activities on the Commonwealth Marine Area, listed turtle species, listed dolphin species, Dugong and Bryde's Whale;	Compliant
2	is consistent with relevant management measures contained in relevant threat abatement plans published by the Department of Environment and Energy;	Compliant
3	has been prepared in accordance with the most current version of the Australian Government National Assessment Guidelines for Dredging (2009);	Compliant
4	has been prepared in accordance with the most current version of the Long Term Monitoring and Management Plan Requirements for 10 year Permits to Dump Maintenance Dredge Material at Sea (July 2012);	Compliant
5	has generally been prepared to align with the relevant broad principles of the Maintenance Dredging Strategy for Great Barrier Reef World Heritage Area Ports;	Compliant
6	demonstrates that in developing the plan all feasible options to reuse or dispose of the dredged material have been properly considered and evaluated;	Compliant
7	contains a framework to ensure compliance with the conditions of permit(s) obtained under the <i>Environment Protection (Sea Dumping) Act 1981</i> ;	Compliant
8	details Traditional Owner employment opportunities, and mechanisms for reporting the number of local indigenous person/s actually employed in the implementation of the Amrun Maintenance Dredge Management Plan – Port and River as per EPBC Approval Condition 42);	Compliant
9	has been prepared in consultation with interested and affected stakeholders; and adequately identifies publication arrangements enabling access for interested persons	Compliant



TABLE 2: Rationale for assigning review categories to criteria.

Criterion and Rationale	LMDMP Section
1: identifies avoidance and mitigation measures for impacts associated with maintenance dredging activities on the Commonwealth Marine Area, listed turtle species, listed dolphin species, Dugong and Bryde's Whale ;	
<p>Compliant</p> <p>Section 9 of the LMDMP sets out a framework for developing a plan (the Environmental Management Plan) for each maintenance dredging campaign to identify avoidance and mitigation measures relevant to that campaign. The section within that framework which discusses mitigation of the impacts of turbidity suggests that management based on thresholds and triggers implemented within a monitoring program would be of little practical value. I agree with this statement for the short timeframe and scale of maintenance dredging campaigns described under this LDMDMP.</p>	S 9.1 & 9.2
2: is consistent with relevant management measures contained in relevant threat abatement plans published by the Department of Environment and Energy;	
<p>Compliant</p> <p>The only Threat Abatement Plan approved, or in draft on the DotEE website at the time of review was: Threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans – 2018</p> <p>Waste management is listed as a heading for each campaign EMP to address.</p>	S. 9.2

Criterion and Rationale	LMDMP Section
<i>3: has been prepared in accordance with the most current version of the Australian Government National Assessment Guidelines for Dredging (2009);</i>	
Compliant The layout and content of the LMDMP is consistent with the current version of the NAGD. The section on alternatives to ocean disposal is particularly strong and presents a good model for other areas where maintenance dredging occurs.	Throughout
<i>4. has been prepared in accordance with the most current version of the Long Term Monitoring and Management Plan Requirements for 10 year Permits to Dump Maintenance Dredge Material at Sea (July 2012);</i>	
Compliant Cells below refer to the requirements listed within the 2012 guidelines. Requirements below have been paraphrased for brevity and should be referred to the original document for more detailed information. My paraphrasing of requirements is shown in [] with my assessment following each.	
<i>[- Explain how the plan fits within the overall management of the port:]</i> Predicted requirements for maintenance dredging at both Amrun Port and the River Port are described based on a detailed review of past dredging and sedimentation studies for the area.	S.5
<i>[- Describe the dredging activity, the material for disposal and the spoil grounds:]</i> – A summary is provided of a September 2017 survey of potential dredge material and a requirement is listed for surveys to be conducted every 5 years. Events which would cause a shorter frequency of sampling are set out appropriately.	S.5.1

Criterion and Rationale	LMDMP Section
<i>[- Describe the existing environment and potential impacts:]</i> – Environmental values for the relevant marine areas have been well studied over some years and are described. While it is difficult to conduct an accurate risk assessment without a specific project, the generic assessment presented here provides an adequate basis for management planning – and specifically requires a new assessment if a maintenance campaign is outside of these parameters. It might add value to future operations here if some auditing of whether predictions were met was conducted after each campaign. (see next item)	S.3, S.8, MEMP
<i>[- Describe the management strategies and actions and how they will be supported by monitoring:]</i> As described earlier, management actions are specified generically in a framework management plan and will not be fully specified until campaign-specific EMPs are developed. The LDMDMP and supporting documents suggest that the impacts of small-scale maintenance dredging (as described here) are understood sufficiently to justify no “impact monitoring”	S.10, MEMP
<i>[- Describe contingency plans for emergency dredging and what will happen if additional testing discovers sediments unfit for disposal:]</i> Previous cyclonic impacts on the need for maintenance dredging have been reviewed and the conclusion that the current program should not require an ‘Emergency Dredging’ scenario appears justified.	S. 7.1
<i>[- How will sediment quality information be kept current over the life of the permit and is there an approved SAP:]</i> The LMDMP sets out the current and historic sediment quality within the Port and outlines how that will be kept current. The MEMP provides further details on likely sampling regimes.	S. 5.1, MEMP
<i>[- Outline a reporting and documentation strategy including actions to report non-compliances:]</i> Section 11 sets out a requirement for reporting non-compliances, however, it would help if this was consolidated as a specific section in the draft EMP (the current draft has a header but no details). The EMP will be a primary operational document and should hold that procedure.	S.9.2, S.11
<i>[- State when reviews will occur and how the Plan may be improved over time:]</i> Audits to be conducted following each campaign, with consultation from the TACC should be sufficient to fill this requirement. The LMDMP is also reviewed for consistency as new conditions from the Sea Dumping Permit may arise.	S.11, S1.2
<i>[- Set out details of the TACC and its operation:]</i> The BPD TAG has been established to fill the TACC role. The membership and function of that group is well described and its role in consultation is discussed.	S.4

Criterion and Rationale	LMDMP Section
<i>[- Specify how the Plan is to be published.]</i> – The LMDMP is to be published and kept current on the Rio Tinto website.	S.1.2
5. has generally been prepared to align with the relevant broad principles of the Maintenance Dredging Strategy for Great Barrier Reef World Heritage Area Ports;	
Compliant	
Cells below refer to the requirements listed within the 2012 guidelines. Requirements below have been paraphrased for brevity and should be referred to the original document for more detailed information. My paraphrasing of requirements is shown in <i>[]</i> with my assessment following each.	
<i>[Principle 1 – Develop LMDMPs]</i> – The document reviewed is an LMDMP consistent with guidelines for long term planning.	LMDMP
<i>[Principle 2: Develop the knowledge base]</i> – The LMDMP and the Sustainable Sediment Management studies undertaken in its support provide a considerable amount of new knowledge and a synthesis of past knowledge on the mechanisms appropriate to dredging and spoil management in the area. In addition, the ambient monitoring program seeks to improve understanding of the local environment.	S.5, S.6, MEMP
<i>[Principle 3: Avoid or minimise the need for maintenance dredging]</i> – The Sustainable Sediment Management study describes the processes leading to the need for maintenance dredging in this area, but does not consider whether there may be practical measures available to reduce the volume of sediment requiring dredging. Principle 3 is qualified that avoidance of a requirement for maintenance dredging is best addressed during planning for capital dredging and may not be practical at later stages.	S.5, S.6
<i>[Principle 4: Limit volumes]</i> – The Plan is clear throughout that it only covers maintenance and not capital dredging.	S.1, S2.
<i>[Principle 5: Maintenance dredging not to be capital dredging]</i> – As above – the plan is clear in targeting maintenance of existing infrastructure.	S.1, S2.
<i>[Principle 6: Beneficial reuse]</i> – The sustainable sediment management study provides a sound basis for evaluating beneficial reuse of sediments.	S. 6

Criterion and Rationale	LMDMP Section
[Principle 7: Comply with NAGD 2009] – The layout and content of the LMDMP is consistent with the current version of the NAGD. The section on alternatives to ocean disposal is particularly strong and presents a good model for other areas where maintenance dredging occurs.	Throughout
[Principle 8: Show a consultative, comparative risk-based analysis of maintenance dredging] – Considerable consultation with the BPDTAG and Traditional Owners is described and a risk-based analysis has been conducted for a generic case.	S.4, S.8
[Principle 9: Justify dredging plant and operational approach] – This will form part of individual campaigns. General environmental specifications are set out for dredging plant in the LMDMP, but only consider a trailer suction hopper dredge. There is no discussion as to whether a backhoe dredger could be used in some locations	S.9.2
[Principle 10: New plant or methods must be justified on improved environmental performance] – Not relevant: No new plant or methods are specified.	
[Principle 11: Identify environmental windows] – Environmental windows (either windows for dredging or avoiding dredging) are described as unlikely to be relevant. However, the Plan sets out that timing of dredging should be developed for an individual EMP and specifies that the need for environmental windows should be examined. This is an appropriate response in a plan that needs to cover a range of dredging scenarios.	S.9.2
[Principle 12: Cumulative impacts, offsets, net benefits] – This principle is more relevant to the GBR than in this part of the Gulf. The prediction within the LMDMP is for minor impacts which would not rate an offsets program.	
[Principle 13: risk-based monitoring programs] – The selection of monitoring programs has been made on the basis of an environmental risk assessment.	S.9.2
[Principle 14: use leading practice management] – The work done around sustainable use of sediments and understanding the sedimentary regime of the port area would classify as leading practice. Its use here should be an example for other projects.	S.5, S.6

Criterion and Rationale	LMDMP Section
[Principle 15: make reporting available] – Regular updates are to be provided to the BPDTAG and as part of the Performance Review, annual reports will be made available on the Rio website to update other stakeholders.	S.11
[Principle 16: provide stakeholders access to monitoring results] – Regular updates are to be provided to the BPDTAG and as part of the Performance Review. It is assumed those updates will include monitoring.	S.11
[Principle 17: Review this strategy] – Review of the GBRWHAP Dredging Strategy is not applicable to any individual LMDMP.	
<i>6: demonstrates that in developing the plan all feasible options to reuse or dispose of the dredged material have been properly considered and evaluated;</i>	
Compliant The LMDMP sets out the detailed process which has been undertaken to consider sustainable management of sediment from maintenance dredging for both Weipa and Amrun Ports. The variety of options considered and the results are well-supported by a series of reports from studies underpinning this work.	S.5, S.6
<i>7: contains a framework to ensure compliance with the conditions of permit(s) obtained under the Environment Protection (Sea Dumping) Act 1981;</i>	
Compliant The LMDMP sets out the various instruments imposing conditions on the conduct of dredging. The Sea Dumping Permit is explicitly listed in the framework for developing campaign specific EMPs.	S.9.2

Criterion and Rationale	LMDMP Section
<i>8: details Traditional Owner employment opportunities, and mechanisms for reporting the number of local indigenous person/s actually employed in the implementation of the Amrun Maintenance Dredge Management Plan – Port and River as per EPBC Approval Condition 42);</i>	
Compliant Employment opportunities for Traditional Owners and mechanisms for identifying these are set out and reference is made to the structure for reporting the success of employment and training schemes.	S. 4.3
<i>9: has been prepared in consultation with interested and affected stakeholders; and adequately identifies publication arrangements enabling access for interested persons.</i>	
Compliant Consultation with the BPD TAG and Traditional Owners is documented in the LMDMP. The LMDMP is to be published on the Rio website and annual performance reports are to be made available on the website.	S.4, S.1.2, S.11