

RAMTECH PTY LTD

INDEPENDENT ENVIRONMENTAL AUDIT JUNE 2016



DUNLOE SANDS QUARRY

**NSW DEPARTMENT OF PLANNING & ENVIRONMENT
PROJECT APPROVAL NUMBER PA06_0030**

Prepared for

Ramtech Pty Ltd

by

Mark Rigby & Associates

JUNE 2016

DOCUMENT CONTROL SHEET

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| Title: | Environmental Compliance Audit Report Dunloe Sands Quarry June 2016 |
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| Summary: | This report presents the findings of an Independent Environmental Audit of Ramtech Pty Ltd's Dunloe Sands Quarry activities for the purpose of assessing compliance against the conditions with NSW Department of Planning & Environment Approval Number PA06_0030. |

REVISION/CHECKING HISTORY

| Revision Number | Date | Checked By | Issued By |
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| Mark Rigby & Associates | 1 | | | | | | | | |
| NSW Department of Planning and Environment | 1 | | | | | | | | |

LIMITATIONS

Mark Rigby & Associates Pty Ltd has prepared this Independent Environmental Audit Report for Ramtech Pty Ltd in relation to their operations at Dunloe Sands Quarry located on Pottsville Mooball Road, Mooball within the Tweed Shire in New South Wales.

We have performed our services for this project in accordance with our current professional standards. No other warranty, expressed or implied is made as to the professional advice included in this submission.

Opinions and judgements expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal opinions. The findings in this report are based on observations made on site, discussion with site personnel and documentation provided by Ramtech Pty Ltd and their representatives. The report may also contain comments and information provided by others. Mark Rigby & Associates cannot take responsibility for advice provided by any third party.

This document has been prepared for the sole purpose of Ramtech Pty Ltd as an Independent Environmental Audit as at 30 May 2016 as required by NSW DP&E Approval Number PA06_0030 Condition 6 of Schedule 5. It may not contain sufficient information for the purposes of other parties, for other uses, other years or at other locations.

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ATTACHMENTS

- ATTACHMENT A -** Director-General approval of Mark Rigby & Associates
as independent auditors
- ATTACHMENT B -** Photographs from site audit

1.0 EXECUTIVE SUMMARY

The following report presents an Independent Environmental Audit which assesses the level of environmental performance of Ramtech Pty Ltd Dunloe Sands Quarry, Mooball against the conditions within the NSW Department of Planning and Environment (DoP) Project Approval 06_0030. The environmental audit was undertaken during May and June 2016 (including a site inspection on 30 May 2016) of the extractive & screening activities at the Dunloe Sands Quarry. Information and documentation considered within the audit is from the date of issue of the DoP Project Approval 06_0030 being 24 November 2009 to 30 May 2016. Where review of monitoring data was undertaken, data reviewed was generally limited to the period of December 2014 to December 2015, unless otherwise noted.

Evidence obtained from the audit resulted in a number of non-compliances, opportunities for improvement and general comments. Section 3.0 provides a Summary of Audit Findings where Non-Compliances were observed. Section 4.0 contains discussion on the Comment/Findings relevant to each individual condition within DoP Project Approval 06_0030.

There are three (3) key areas of non-compliances highlighted for discussion in this Executive Summary. These relate to:

1. Management of Fines and Potential Acid Sulfate Soil;
2. AEMR Reporting not in accordance with PA06_0030; and
3. Environmental Monitoring not in accordance with PA06_0030.

Of the above, the main environmental risk relates to item 1, being the management of fines and potential acid sulfate soils on-site. Items 2 & 3 are considered to present a lower environmental risk, be administrative in nature and/or are in the process of being addressed and transitioning to full compliance. It is acknowledged that Ramtech have a DoP approved Action Plan in place to address the majority of non-compliances identified in this report.

1. Management of Fines and Potential Acid Sulfate Soil

Observation at the time of the audit was that fines from the wash-plant are discharged to an initial fore-bay pond prior to discharging via a pipe into the re-internment pond at a point less than 3 metres from the water surface as evidenced by the vegetation growth immediately adjacent the discharge location. Quarry staff move the pipe location based on visual monitoring. No record of depth of fines re-internment is taken.

Section 7.4.3 of the approved EMP outlines the Acid Sulfate Soil (ASS) Management Plan (within the Soil and Water Management Plan). This includes a process for identification, treatment and verification sampling of Potential Acid Sulfate Soil (PASS).

Section 7.4.4 of the approved EMP outlines the process for ASS identification for dry excavated material.

Section 7.4.5 of the approved EMP commits to no material will be transported off site until validation tests indicate compliance with acceptance criteria based on the action levels of oxidisable sulfur as stated in the ASSMAC Guidelines.

Ramtech advised that some fines material is incorporated into products when needed and is subject to lime treatment to reduce the potential risk of acid sulfate leaching. No evidence of verification sampling having occurred was provided at the time of the audit.

ASS sample results dated 18/12/2009, 14/7/2010 and 21/9/2010 observed indicated an exceedance of the action criteria in the approved EMP.

These findings relate to Schedule 3 Conditions 10 & 11 of PA06_0030.

2. AEMR Reporting not in accordance with PA06_0030

The most recent Annual Environmental Monitoring Report (AEMR) available covered the period December 2014 to December 2015 was reviewed and did not contain all information required to fully comply with relevant conditions within PA06_0030. These findings relate to information such as the following not being provided including:

- The available flood storage capacity of the site (Schedule 3 Condition 17);
- Annual production data to the DII using the standard form (Schedule 3 Condition 45);
- Information relating to works carried out in the last 12 months, works that will be carried out in the next 12 months and sufficient analysis of monitoring results against relevant criteria/previous monitoring results (Schedule 5 Condition 5); and
- Provision of the AEMR to relevant agencies (Schedule 5 Conditions 5 & 10).

Ramtech have stated that they are currently reviewing and revising the AEMR at the request of the Department and have committed to submitting an updated version on or before the 14/8/2016.

3. Environmental Monitoring not in accordance with PA06_0030

A number of environmental monitoring requirements are not undertaken fully in compliance with approval requirements. These non-compliances relate to:

- Air quality monitoring (Schedule 3 Conditions 6 & 7);
- Water quality and blue green algae (Schedule 3 Conditions 9, 22, 24); and
- Regular update of monitoring results (Schedule 4 Condition 11).

It is noted that requests to amend monitoring related to the above aspects within the approved EMP are currently in progress and/or an approved Action Plan is in place to address these requirements.

2.0 INTRODUCTION

Ramtech Pty Ltd was granted Project Approval (PA06_0030) for the Dunloe Sands Quarry on 24 November 2008, with a subsequent modification (Mod 1) to this approval granted on 28 August 2009.

Dunloe Sands Quarry operations are located approximately 4.5 km south-southwest of Pottsville on the Pottsville Mooball Road. The site is located adjacent to Mooball Creek, and is approximately 4km upstream of the creek mouth. Surrounding properties are currently used for agricultural purposes including sugar cane farming and grazing.

A range of native vegetation communities occur including regrowth Wet Sclerophyll Forest on the western upper slopes and a combination of Swamp Sclerophyll (Melaleuca, Casuarina) and Coastal Forests on sand (Swampbox, Littoral Rainforest, Banksia Forest) in the eastern areas adjacent to Mooball Creek. Approximately 15 hectares of the site is dedicated to environmental rehabilitation/revegetation purposes.

The Project Approval relates to ten (10) lots providing a total site area of 629.74 hectares. The Total Extraction Area approved is 56.7 hectares. Dredge Ponds 1 and 2 are located on Lot 1 in DP 755721 & Lots 1 & 2 in DP 780199.

The extraction of sand from the subject site is by means of both suction dredge (wet extraction) and dry extraction (initial overburden and brickies loam extraction). There is a nominal maximum extraction depth of 12 metres, and approval is provided for the extraction of up to 300,000 tonnes annually. Sand resources available are estimated at 9,000,000 tonnes.

3.0 AUDIT METHODOLOGY

3.1 AUDIT SCOPE

The following report presents an Independent Environmental Audit (IEA) which assesses the level of environmental performance of the Dunloe Sands Quarry activities against the conditions within NSW DP&E Approval Number PA06_0030. Information and documentation considered within the audit is from the date of issue of Approval Number PA06_0030 being the 24 November 2008 up until to 30 May 2016. Where review of monitoring data was undertaken, data reviewed was generally limited to the period of December 2014 to December 2015 as incorporated into the latest available Annual Monitoring Environmental Report (AEMR), unless otherwise noted.

Schedule 5 Condition 6 of PA06_0030 requires Ramtech to undertake an IEA to assess compliance with the conditions of the Project Approval within two (2) years of the start of quarrying operations on site, and every five (5) years thereafter unless directed otherwise by the Director-General.

In accordance with Schedule 5 Condition 6 of PA06_0030, the IAE must:

- Be conducted by a suitably qualified, experienced, and independent person(s) whose appointment has been approved by the Director-General;
- Include consultation with the relevant agencies;
- Assess the environmental performance of the project, and its effects on the surrounding environment;
- Review the adequacy of any strategy/plan/program required under this approval; and if necessary,
- Recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval.

3.2 AUDIT OBJECTIVES

MRA understands that the audit is to focus, in the first instance, on the requirements of Condition 6 of Schedule 5 of PA06_0030, however, if other matters beyond the scope of conditions is observed will be noted and discussed with management and will be included in the report with relevant comments/recommendations.

The audit was completed by undertaking the following tasks:

Task 1 – Desk-top Assessment of Documents including:

- Review of Project Approval conditions;
- Review of the Environmental Assessment of the project titled “Environmental Assessment Part 3A – Environmental Planning and Assessment Act 1979, Dunloe Sands (prepared by PLANIT Consulting;
- Review of Dunloe Sands Statement of Commitments as outlined in the Project Approval;

- Confirmation of scope and objectives of audit;
- Preparation of pre-audit questionnaire and development of audit protocol / checklist for review ;
- Issue of pre-audit questionnaire / audit protocol for distribution to and completion by relevant staff where necessary.

Task 2 – Site visit including:

1. Pre-audit meeting to confirm audit scope / objectives / schedule / audit participants;
2. Review and analysis of relevant development and operational documentation and data;
3. Conduct of audit; and
4. Post-audit meeting to review audit findings and discuss any corrective action recommendations.

Task 3– Preparation of final audit report

- Executive Summary;
- Audit Scope and Objectives;
- Audit Findings / Recommendations; and
- Audit Checklists / Supporting Information.
-

3.3 AUDIT TEAM

As required by Condition 6 of Schedule 5 of PA06_0030, the IAE is to be conducted by a suitably qualified, experienced, and independent person(s) whose appointment has been approved by the Director-General. Please refer to **Attachment A** which includes approval for Mark Rigby and Allison Reiser of Mark Rigby and Associates (MRA) to undertake the audit.

A summary of each project team members experience is provided below. Both Mark and Allison conducted the site audit for this project.

Mark Rigby – Project Manager

Mark is director of MRA and has over thirty-five (35) years of experience in the environmental management profession. He has extensive experience in environmental auditing (Registered Auditor 15303), environmental management and reporting across a variety of projects including resource extraction, manufacturing, Government sector and waste management.

Allison Reiser– Senior Environmental Consultant & Lead Auditor

Allison has over twenty (20) years of experience in the environmental management profession. She has past employment experience with Local Government, State Government (EPA) and the private sector. She is a RABQSA registered lead environmental auditor (Certificate No. 119876) and has extensive experience in environmental management system and ERA auditing.

3.4 ENVIRONMENTAL AUDIT PROCESS

The audit was undertaken at Dunloe Sand Quarry over a one (1) day period on 30 May 2016.

The audit involved a systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the operations comply with the conditions of Project Approval PA06_0030.

The audit was undertaken in the presence of and with the assistance of Dunloe's Sands Management (Steve Peterson and Sasha Peterson) and their Quarry Supervisor (Daniel Dwyer) and involved:

- Review of relevant documentation, including procedures, documents, record keeping, environmental monitoring and data control;
- Discussion with relevant site personnel;
- An inspection of site activities to verify compliance (or otherwise);
- Assessment of compliance with each PA06_0030 condition; and
- Preparation of an Independent Environmental Audit Report, including compilation of a summary table of recommendations based on the audit outcome.

3.5 AUDIT REPORT FORMAT

An Audit Checklist was prepared based on Project Approval PA06_0030 and has been included in **Section 4.0 Audit Findings**. The Audit Checklist re-states each PA06_0030 condition and includes findings/ comments relating to the condition. Where applicable, a reference to the witnessed document has also been provided.

The following comment headers were applied to each DoP condition that did not meet the full requirements of that condition, or those that were not applicable or not auditable (i.e. a statement only):

- **Non-Compliant** – The operations on the subject site does not comply with the requirements of the condition. A partial non-compliance will be allocated as a non-compliance against the condition.
- **Not Applicable** – The current operations of the subject site are not applicable to the condition.

Where conditions are assessed as Non-Compliant or there is a pertinent General Comment or Opportunity for Improvement identified, these have been noted in the recommendations column in **Section 4.0** of this report.

3.6 SUMMARY TABLES

A Summary Table has been prepared based on audit findings to present succinct information on items determined to be Non-Compliant. This Summary Table has been included in **Section 3.0** of this report and is presented in the following format:

Section 4.0 contains discussion on the Comment/Findings relevant to each individual condition within DoP Project Approval 06_0030.

Each Summary Table has been presented in the following format:

| Condition | Comment | Compliance Status | Recommendations |
|---------------------------|--|--|--|
| Summary of the condition. | Summary of the evidence obtained in relation to the condition. | Compliant Not Applicable Non-Compliant | Recommendation to achieve compliance or opportunity for improvement. |

4.0 SUMMARY OF NON-COMPLIANCES

| SCHEDULE 2 ADMINISTRATIVE CONDITIONS | Comment | Compliance Status | Recommendations |
|---|---|----------------------|---|
| <p>4. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:</p> <ul style="list-style-type: none"> a) any reports, plans, programs or correspondence that are submitted in accordance with this approval; and b) the implementation of any actions or measures contained in these reports, plans, programs or correspondence. | <p>Ramtech advised that following the NSW Department of Planning and Environment Sand Quarry Audit Campaign in 2015, an Action Plan was developed to address non-compliances identified during the audit. An Action Plan was prepared in response to this audit report and submitted to the Department on 15 February 2016. Following further discussion, the Department acknowledged acceptance of an updated Action Plan on 19 February 2016.</p> <p>Ramtech are currently working through completion of these items.</p> | <p>Non-Compliant</p> | <p>Continue implementation of the Action Plan to transition nominated conditions to compliance.</p> |

| <p align="center">SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p align="center">Comment</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------------------------|--|--|--|---------|----------------------|-----------|------------------|-----------|--|--------|----------------------|--|--------|----------------------|-----------|------------------|--|------------------------------------|----------------|--------|---------------------------|---------------------------|--|-----------------------------|--|
| <p>AIR QUALITY</p> <p>Impact Assessment Criteria</p> <p>6. The Proponent shall ensure that dust generated by the project does not cause additional exceedances of the criteria listed in Tables 3 to 5 at any privately owned land.</p> <table border="1" data-bbox="203 547 887 663"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>24 hour</td> <td>50 µg/m³</td> </tr> </tbody> </table> <p><i>Table 3: Short Term Impact Assessment Criteria for Particulate Matter</i></p> <table border="1" data-bbox="203 703 916 986"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> <td>90 µg/m³</td> </tr> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>Annual</td> <td>30 µg/m³</td> </tr> </tbody> </table> <p><i>Table 4: Long Term Impact Assessment Criteria for Particulate Matter</i></p> <table border="1" data-bbox="203 1038 916 1177"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Maximum increase in deposited dust level</th> <th>Maximum total deposited dust level</th> </tr> </thead> <tbody> <tr> <td>Deposited dust</td> <td>Annual</td> <td>2 g/m²/month</td> <td>4 g/m²/month</td> </tr> </tbody> </table> <p><i>Table 5: Long Term Impact Assessment Criteria for Deposited Dust</i></p> <p><i>Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 1991, AS/NZS 3580.10.1-2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.</i></p> | Pollutant | Averaging period | Criterion | Particulate matter < 10 µm (PM ₁₀) | 24 hour | 50 µg/m ³ | Pollutant | Averaging period | Criterion | Total suspended particulate (TSP) matter | Annual | 90 µg/m ³ | Particulate matter < 10 µm (PM ₁₀) | Annual | 30 µg/m ³ | Pollutant | Averaging period | Maximum increase in deposited dust level | Maximum total deposited dust level | Deposited dust | Annual | 2 g/m ² /month | 4 g/m ² /month | <p>No dust monitoring results were identified within the AEMR observed for the previous 12 months. Ramtech advised that dust monitoring did not commence until 2015. Results provided relate to analysis reports dated 1/10/2015, 9/12/2015, 10/5/2016 and 31/5/2016 and address deposited dust only and not particulate matter.</p> <p>It is noted that a request to amend monitoring within the approved EMP is currently in progress. An extract of the scope of amendments under discussion between the Department and ASK was observed. Ramtech advised the proposed amendment will request a reduction in the PM₁₀ monitoring until such time a production increases to over 200,000T. TSP monitoring proposed to continue whilst production is less than 200,000T.</p> | <p>Non-Compliant</p> | <p>Implement dust monitoring in accordance with current approved EMP until such time as an amendment is approved by DoP.</p> |
| Pollutant | Averaging period | Criterion | | | | | | | | | | | | | | | | | | | | | | | | |
| Particulate matter < 10 µm (PM ₁₀) | 24 hour | 50 µg/m ³ | | | | | | | | | | | | | | | | | | | | | | | | |
| Pollutant | Averaging period | Criterion | | | | | | | | | | | | | | | | | | | | | | | | |
| Total suspended particulate (TSP) matter | Annual | 90 µg/m ³ | | | | | | | | | | | | | | | | | | | | | | | | |
| Particulate matter < 10 µm (PM ₁₀) | Annual | 30 µg/m ³ | | | | | | | | | | | | | | | | | | | | | | | | |
| Pollutant | Averaging period | Maximum increase in deposited dust level | Maximum total deposited dust level | | | | | | | | | | | | | | | | | | | | | | | |
| Deposited dust | Annual | 2 g/m ² /month | 4 g/m ² /month | | | | | | | | | | | | | | | | | | | | | | | |

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| <p>Dust Monitoring Program</p> <p>7. The Proponent shall prepare and implement a Dust Monitoring Program for the project to the satisfaction of the Director-General. This program must:</p> <ul style="list-style-type: none"> a) be submitted to the Director-General prior to carrying out any development on the site; b) be prepared in consultation with DECCW; and c) include details of how the air quality performance of the project would be monitored, and include a protocol for evaluating compliance with the relevant air quality criteria in this approval. <p><i>Note: Initially, this program may concentrate on monitoring the dust deposition impacts of the project. However, in time, it may be expanded to include other pollutants.</i></p> | <ul style="list-style-type: none"> a) DMP submitted prior to operation as part of the Dunloe Sands EMP. Department approval granted on 19th June 2009. Formal commencement of operations occurred in October 2010. Dust monitoring did not commence until 2015, and a request to amend monitoring within the approved EMP is currently being prepared. <p>Results provided relate to analysis reports dated 1/10/2015, 9/12/2015, 10/5/2016 and 31/5/2016 and address deposited dust only and not particulate matter.</p> <ul style="list-style-type: none"> b) EMP approval letter (19/6/2009) acknowledges sufficient opportunity for consultation was provided. c) Addressed within Section 7.3 of EMP (July 2012). Ramtech advised that they have undertaken a review of the DMP and a request to amend monitoring within the approved EMP is currently being prepared. | <p>Non-Compliant</p> | <p>Implement dust monitoring in accordance with current approved EMP until such time as an amendment is approved by DoP.</p> |
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Water Quality Objectives

9. The Proponent shall aim to meet the water quality objectives in Table 6 for water in the dredge ponds and in groundwater adjacent the dredge ponds, unless otherwise approved by the Director-General.

| Pollutant | Unit of Measure | Water Quality Objectives |
|----------------------------|--|---------------------------------|
| Turbidity | NTU | 5 - 20 |
| pH | pH | 6.5 – 8.5 |
| Oil and Grease | mg/L | 10 |
| Salinity | µS/cm | <3,000 |
| Dissolved oxygen | mg/L | >6 |
| Chlorophyll-a | µg/L | 2-10 |
| Faecal coli forms | Median No./100mL | <1000 |
| Enterococci | Median No./100mL | <230 |
| Algae and blue-green algae | No. Cells/mol (M.aeruginosa) mm ³ /L (total biovolume) | <50,000 <4 |
| Sodium | mg/L | 500 |
| Potassium ion | mg/L | 40 |
| Magnesium ion | mg/L | 100 |
| Chloride ion | mg/L | 1000 |
| Sulphate ion | mg/L | 800 |
| Bicarbonate ion | mg/L | 400 |
| Soluble Iron ion | mg/L | 20 |
| Soluble aluminium ion | mg/L | 0.5 |
| Ammonium ion | mg/L | 20 |

Table 6: Water Quality Objectives

It is noted that in 2012, Ramtech engaged Hydrosphere to undertake a review of the water quality monitoring program for the Dunloe Sands operation. Correspondence dated 26/4/12 from the Department approved some of the requested changes and requested Ramtech seek formal approval of the revised monitoring schedule.

The EMP Revision July 2012 was reviewed and it is noted that Interim Target Criteria are identified for the parameters in Table 6.

The most recent Annual Environmental Monitoring Report (AEMR) was reviewed and contained results for the previous 12 months (Dec 014 – Dec 2015).

Surface Water Sampling

EMP July 2012 identifies rainfall event-based and quarterly monitoring for pH, EC, temperature, suspended solids, dissolved oxygen, total nitrogen & total phosphorous.

There are 4 surface water locations – SW3, SW4, SW9 & SW10.

Surface Water Interim Target Criteria are identified in Section 7.4.9 Surface Water Management Plan (Surrounding Environment) of the EMP.

Section 3.2 of the AEMR confirms quarterly sampling was undertaken but no rainfall event-based sampling was noted. It was also noted that the interim target criteria referenced for some parameters (pH, EC, DO & TN) did not reflect the interim criteria as indicated in Section 7.4.9 Surface Water Management Plan (Surrounding Environment) of the EMP. Rather Interim Target Criteria identified in Section 7.4.8 Surface Water Quality Management/Monitoring Program (Including Blue Green Algae Management) – On-Site Lakes has been referenced.

Exceedances were identified against the Section 7.4.9 Interim Criteria for pH, EC, DO, SS & TN. Refer to Tables 11, 12, 13 & 16 of AEMR.

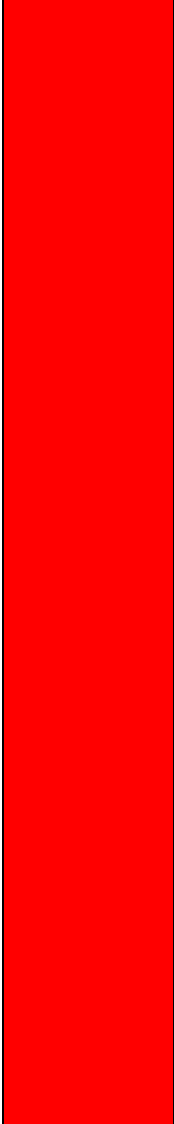
Quarterly monitoring for pH, EC, temperature, REDOX potential, dissolved oxygen, groundwater level, calcium, magnesium, sodium, potassium, bicarbonate, sulfate, chloride, filterable iron, aluminium and arsenic.

Non-Compliant

Suitable water quality monitoring equipment be available to staff to allow for in-situ monitoring as per the EMP at all times of operation.

Develop a process for calibration of in-situ monitoring equipment and maintain records of calibration occurring.

Review the AEMR format to ensure relevant Interim Targets are reflected and all required information is presented in the reports.

| | | | |
|---|--|--|--|
| <p>Notes:</p> <ul style="list-style-type: none"> • <i>The objectives for dissolved oxygen, turbidity and algae are relevant to surface water only.</i> • <i>The Department acknowledges that short term exceedances of these objectives may occur during natural events such as flooding.</i> • <i>The Department acknowledges that pre-existing water quality may not meet the objectives for some analytes, including salinity. The proponent shall strive to meet the water quality objectives through implementation of the Soil and Water Management Plan (see condition 18 below), as far as is reasonable and feasible and within the Proponent's control, to the satisfaction of the Director-General.</i> | <p>There are 5 groundwater locations – DLP1, DLP3, DLP5, DLP6 & DLP7.</p> <p>Exceedances were identified against monthly results for pH, EC and DO at some locations.</p> <p>Exceedances were identified against quarterly results for all parameters tested at some locations.</p> <p>Results for aluminium, bicarbonate and alkalinity are not discussed within the AEMR reviewed, however it is noted that analysis has been undertaken on some Tweed Laboratory Centre Reports.</p> <p><u>Lake Water Sampling</u> EMP July 2012 identifies monthly monitoring for pH, EC, dissolved oxygen, turbidity and oil & grease.</p> <p>EMP July 2012 identifies quarterly monitoring for the above parameters and magnesium, sodium, potassium, bicarbonate, sulfate chloride, filterable iron, aluminium, manganese, arsenic and chlorophyll a.</p> <p>EMP July 2012 identifies quarterly vertical monitoring at 1 metre intervals for pH, EC, temperature and dissolved oxygen.</p> <p>Lake sample is taken at 1 location at 1 metre depth intervals.</p> <p>Interim Target Criteria are identified in Section 7.4.8 Surface Water Quality Management/Monitoring Program (Including Blue Green Algae Management) – On-Site Lakes.</p> <p>Exceedances were identified against monthly results including turbidity & DO.</p> |  | |
|---|--|--|--|

| <p align="center">SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p align="center">Comment</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
|---|---|--|--|
| <p>Fines Management</p> <p>10. The Proponent shall ensure that all excavated potential acid sulfate soil fines material is returned back to below the watertable as soon as possible to prevent oxidation.</p> <p>No potential acid sulfate soil shall be removed from the site, unless adequately neutralised in accordance with methods approved under the Soil and Water Management Plan.</p> | <p>Observation at the time of the audit was that fines from the wash-plant are discharged to an initial fore-bay pond prior to discharging via a pipe into the re-internment pond. Quarry staff move pipe location based on visual monitoring.</p> <p>Section 7.4.3 of the approved EMP outlines the ASS Management Plan (within the Soil and Water Management Plan). This includes a process for identification, treatment and verification sampling of PASS.</p> <p>Section 7.4.4 of the approved EMP outlines the process for ASS identification for dry excavated material.</p> <p>Section 7.4.5 of the approved EMP commits to no material will be transported off site until validation tests indicate compliance with acceptance criteria based on the action levels of oxidisable sulfur as stated in the ASSMAC Guidelines.</p> <p>Ramtech advised that some fines material is incorporated into products when needed and is subject to lime treatment to reduce the potential risk of acid sulfate leaching. No evidence of verification sampling having occurred was provided at the time of the audit.</p> <p>It was also advised that dry extracted topsoil is used at times as part of the Tweed Shire Council Drain Filling Project.</p> <p>Exceedance of the action criteria were observed in ASS sample results dated 18/12/2009, 14/7/2010 and 21/9/2010.</p> | <p align="center">Non-Compliant</p> | <p>Implement a process to demonstrate that the fines are not 'potential acid sulfate soil fines' or are adequately neutralised in accordance with the approved Soil and Water Management Plan.</p> |
| <p>11. The Proponent shall ensure that all potential acid sulfate soil fines material is discharged into the pond at a depth of no less than 3 metres from the water surface, and that all fines are deposited to a final depth of at least 8 metres from the water surface, unless an alternative method(s) is approved by OOW and the Director-General.</p> | <p>Observation at the time of the audit was that fines are discharged via a pipe into the re-internment pond at a point less than 3 metres from the water surface as evidenced by the vegetation growth immediately adjacent the discharge location. The depth of pipe is fixed from the starting point based on the water level at that time. Quarry staff move pipe location based on visual monitoring.</p> <p>No record of depth of fines re-internment is taken.</p> | <p align="center">Non-Compliant</p> | <p>1.Recommend a review of Fines Management including the method in which potential ASS fines are placed at depths in accordance with Schedule 3 Condition 11.</p> <p>2.Undertake refresher training with Quarry staff on the requirements of PA06_0030.</p> |

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| <p>Flood Management</p> <p>17. The Proponent shall ensure that the flood storage capacity of the site is no less than the pre-existing flood storage capacity at all stages of the project. Details of the available flood storage capacity shall be reported in the AEMR.</p> | <p>The most recent Annual Environmental Monitoring Report (AEMR) available covered the period December 2014 to December 2015 was reviewed and did not contain information on the available flood storage capacity of the site.</p> | <p>Non-Compliant</p> | <p>Incorporate flood storage capacity information into the AEMR.</p> |
| <p>Management and Monitoring</p> <p>22. The Blue-Green Algae Management Plan shall:</p> <ul style="list-style-type: none"> a) be prepared by a suitably qualified blue-green algae expert, whose appointment has been approved by the Director-General; b) be consistent with extant guidelines for blue-green algae management including the NHMRC's <i>Guidelines for Managing Risks in Recreational Water</i>; c) describe the measures that would be implemented to prevent and control the sources of algal blooms over the short, medium and long term; and d) define procedures for the management and notification of identified algal blooms. | <p>A Blue Green Algae Management Plan (BGAMP) is provided in Section 7.4.7 of the approved EMP. Amendment to the BG Algae MP to reduce monitoring during cooler months was approved on 30/8/2011. Ramtech advised that the BGAMP is currently under review again with a proposed amendment being prepared for submission to the Department.</p> <ul style="list-style-type: none"> a) The BG Algae MP was prepared initially by Dr Paul Wright of the Tweed Laboratory Centre as part of the EMP approved in 2009. The amendment to the BG Algae MP approved by the Department in 2011 was also prepared by Dr Paul Wright. a) BG Algae MP notes that extraction area is not classified as 'recreation waterbody' in accord with NHMRC. Modified alert levels and monitoring requirement are incorporated in the approved BG Algae MP. b) Measures outlined in BGAMP. A review of the AEMR December 2014 to December 2015 indicates monitoring is undertaken monthly. Approved BGAMP identifies fortnightly monitoring during rather than monthly from October to April. Whilst not in the AEMR reviewed, Ramtech have advised that fortnightly monitoring commenced on 25/1/2016 and continued until 29/4/2016. A sample of analysis results were provided and results for 25/1/2016 and 25/2/2016 indicate results for chlorophyta greater than 500 cells/ML c) Addressed within the BGAMP, including guidelines for cyanobacterial alert levels, monitoring requirements and recommended actions. | <p>Non-Compliant</p> | <p>Implement monitoring requirements as outlined in current approved Blue Green Algae Management Plan until such time as an amendment to this condition is approved.</p> |

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| <p>24. The Ground Water Monitoring Program shall include:</p> <ul style="list-style-type: none"> a) detailed baseline data on groundwater levels and quality, based on statistical analysis; b) groundwater impact assessment criteria; c) a program to monitor ground water levels and quality; d) a program to monitor ground water level effects on vegetation, and on ground water supply to adjoining properties; and e) a protocol for the investigation, notification and mitigation of identified exceedances of the groundwater impact assessment criteria. | <p>A Ground Water Monitoring Program is provided in Section 7.4.10 of the approved EMP. Items a), b), c), and e) are addressed within Sections 7.4.10.</p> <p>Item d) is not specifically addressed within the Groundwater Monitoring Program.</p> <p>It is noted that in 2012, Ramtech engaged Hydrosphere to undertake a review of the water quality monitoring program for the Dunloe Sands operation. Correspondence dated 26/4/12 from the Department approved some of the requested changes and requested Ramtech seek formal approval of the revised monitoring schedule.</p> | <p>Non-Compliant</p> | <p>Implement monitoring requirements as outlined in current approved Ground Water Management Plan until such time as an amendment to this condition is approved.</p> |
| <p>REHABILITATION AND LANDSCAPING</p> <p>Rehabilitation and Revegetation</p> <p>26. The Proponent shall:</p> <ul style="list-style-type: none"> a) rehabilitate and revegetate the 15 ha hectares of land identified in the EA (see the revegetation plan in Appendix 2); and b) within 12 months of the commencement of quarrying operations, make suitable arrangements to provide appropriate long term security for the revegetation area to ensure it is managed for conservation purposes to the satisfaction of the Director-General. | <ul style="list-style-type: none"> a) Rehabilitation and Revegetation Management Plan contained in Appendix C of approved EMP. Section 23.0 details Site Rehabilitation. b) Long term arrangements for the security of the revegetation land has not been finalized. It is noted however that development of a master planned long term strategy for the site including security of the revegetation land is in progress. <p>It was noted that progress reports of the rehabilitation are included in the AEMR.</p> | <p>Non-Compliant</p> | <p>Continue development of long term arrangements for security of the revegetation land to progress finalisation as soon as possible.</p> |
| <p>PRODUCTION DATA</p> <p>45. The Proponent shall:</p> <ul style="list-style-type: none"> a) provide annual production data to the DII using the standard form for that purpose; and b) include a copy of this data in the AEMR. | <p>Loadrite scale system is installed in loaders.</p> <p>Ramtech provided a copy of the DII standard form for reporting annual production data for the 2014-2015 period (44,800 tonnes). This represents a small variation to the sales summary data provided for July 14 to June 15 (44,110.68 tonnes).</p> <p>A review of the AEMR for Dec 2014- Dec 2015 indicated that the annual production data was not included. Ramtech have stated that a copy of this production data will be included in future AEMR's.</p> | <p>Non-Compliant</p> | <p>Include the annual production data in the AEMR.</p> |

| <p style="text-align: center;">SCHEDULE 5</p> <p style="text-align: center;">ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS</p> | <p style="text-align: center;">Comments</p> | <p style="text-align: center;">Compliance Status</p> | <p style="text-align: center;">Recommendations</p> |
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| <p>ANNUAL REPORTING</p> <p>5. Within 12 months of the date of this approval, and annually thereafter, the Proponent shall submit an AEMR to the Director-General and relevant agencies. This report must:</p> <ul style="list-style-type: none"> a) identify the standards and performance measures that apply to the project; b) describe the works carried out in the last 12 months; c) describe the works that will be carried out in the next 12 months; d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years; e) include a summary of the monitoring results for the project during the past year; f) include an analysis of these monitoring results against the relevant: <ul style="list-style-type: none"> • impact assessment criteria/limits; • monitoring results from previous years; and • predictions in the EA; g) identify any trends in the monitoring results over the life of the project; h) identify any non-compliance during the previous year; and i) describe what actions were, or are being, taken to ensure compliance. | <p>PA06_0030 was granted on 24 November 2009. The Dunloe Sands website was reviewed and had available AEMR's as follows:</p> <ul style="list-style-type: none"> • Nov 2010 to April 2011 • May 2011 to Oct 2011 • Nov 2011 to Oct 2012 • Nov 2012 to Oct 2013 • Nov 2013 to Oct 2014 • Nov 2013 to April 2014 • Dec 2014 to June 2015 • Jan 2015 to Dec 2015 <p>A review of the AEMR titled Jan 2015 to Dec 2015 on the webpage provided a document titled "Six Monthly Monitoring for July 2015 – Dec 2015". This AEMR did however contain data for the Dec 2014 to Dec 2015 period.</p> <p>Correspondence provided identified that the AEMR was submitted to DoP on 5 May 2016 and it was considered generally in accordance with MP06_0030. It is noted that the DoP requires future AEMR's are to be submitted no later than 31 March immediately following each respective reporting period.</p> <p>Items a), d), e), g), h) and i) are addressed within the AEMR reviewed. Items b), c) and f) did not appear to be addressed within the AEMR. Ramtech have stated that they are currently reviewing and revising the AEMR at the request of the Department and have committed to submitting an updated version on or before the 14/8/2016.</p> <p>Ramtech consultant PlanIt have stated that they posted AEMR's to relevant agencies, however no additional physical evidence was provided to confirm this at the time of the audit.</p> | <p>Non-Compliant</p> | <p>See Surface Water Condition comments.</p> <p>Ensure all required items are adequately addressed within the AEMR.</p> <p>Ensure the AEMR is submitted within the DoP nominated timeframe and evidence of it being provided to relevant agencies is maintained.</p> |

| <p align="center">SCHEDULE 5</p> <p align="center">ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS</p> | <p align="center">Comments</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>INDEPENDENT ENVIRONMENTAL AUDIT</p> <p>6. Within 2 years of the start of quarrying operations on site, and every 5 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:</p> <ul style="list-style-type: none"> a) be conducted by a suitably qualified, experienced, and independent person(s) whose appointment has been approved by the Director-General; b) include consultation with the relevant agencies; c) assess the environmental performance of the project, and its effects on the surrounding environment; d) assess whether the project is complying with the relevant standards, performance measures and statutory requirements; e) review the adequacy of any strategy/plan/program required under this approval; and, if necessary, f) recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval. | <p>This audit undertaken by Mark Rigby & Associates (MRA) represents the first Independent Environmental Audit conducted on the Dunloe Sands quarry operations and was not conducted within 2 years from the start of quarrying operations in October 2010.</p> <ul style="list-style-type: none"> a) MRA were approved as suitably qualified, experienced and independent person on 28/4/2016. b) Nominated contacts within relevant agencies were consulted. c) Conditions set within PA06_0030 were placed on the Dunloe Sands quarry operation to set acceptable environmental performance standards. The MRA IEA was conducted against conditions within PA06_0030. d) As per c) e) As per c) f) Recommendations have been provided throughout the IEA report as considered appropriate by MRA. | <p>Non-Compliant</p> | <p>Ensure that future IEA's are undertaken in timeframes nominated by the Director-General.</p> |
| <p>ACCESS TO INFORMATION</p> <p>10. Within 1 month of the approval of any plan/strategy/program required under this approval (or any subsequent revision of these plans/strategies/programs), or the completion of any independent environmental audit or AEMR, the Proponent shall:</p> <ul style="list-style-type: none"> a) provide a copy of the relevant document/s to Tweed Shire Council and relevant agencies; and b) ensure that a copy of the relevant document/s is made publicly available on site and/or at the Proponent's regional office, to the satisfaction of the Director-General | <p>Ramtech consultants Planit advised that this has occurred, however no record/evidence was provided to confirm the EMP and AEMR's was submitted to any other relevant agencies.</p> <p>The Dunloe Sands website was reviewed and had available AEMR's as follows:</p> <ul style="list-style-type: none"> • Nov 2010 to April 2011 • May 2011 to Oct 2011 • Nov 2011 to Oct 2012 • Nov 2012 to Oct 2013 • Nov 2013 to Oct 2014 • Nov 2013 to April 2014 • Dec 2014 to June 2015 • Jan 2015 to Dec 2015 <p>A review of the AEMR titled Jan 2015 to Dec 2015 on the webpage provided a document titled "Six Monthly Monitoring for July 2015 – Dec 2015". This AEMR did however contain data for the Dec 2014 to Dec 2015 period.</p> | <p>Non-Compliant</p> | <p>Ensure that copies of any plan/strategy/program or subsequent revision required under the approval, each AEMR and IEA's are provided to the Tweed Shire Council and relevant agencies within the Department's nominated timeframes.</p> |

| <p align="center">SCHEDULE 5</p> <p align="center">ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS</p> | <p align="center">Comments</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>11. During the project, the Proponent shall:</p> <p>a) make a summary of monitoring results required under this approval publicly available at the Proponent's regional office; and</p> <p>b) update these results regularly (at least every 3 months), to the satisfaction of the Director-General</p> | <p>Ramtech advised that AEMR's containing monitoring results are available from the Dunloe Sands website and also at their Murwillumbah office located at 30-32 Lundberg Drive, Murwillumbah NSW 2483.</p> <p>Ramtech are currently updating the process for collation of monitoring results to ensure that results will be available on at least a quarterly basis.</p> | <p align="center">Non-Compliant</p> | <p>Ensure that processes are established and implemented to update monitoring results at least quarterly and to the satisfaction of the Director-General.</p> |

5.0 ENVIRONMENTAL AUDIT FINDINGS

| <p style="text-align: center;">SCHEDULE 2 ADMINISTRATIVE CONDITIONS</p> | <p style="text-align: center;">Comment</p> | <p style="text-align: center;">Compliance Status</p> | <p style="text-align: center;">Recommendations</p> |
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| <p>Obligation to Minimise Harm to the Environment 1. The Proponent shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.</p> | <p>Except as otherwise noted within the audit report, the proponent is considered to be taking practicable measures to prevent and/or minimise harm to the environment from the Dunloe Sands Quarry operation.</p> | <p>Compliant</p> | <p>Refer to recommendations as noted against individual conditions within the audit report.</p> |
| <p>Terms of Approval 2. The Proponent shall carry out the project generally in accordance with the:</p> <ul style="list-style-type: none"> a) EA; b) statement of commitments; and c) modification application 06_0030 MOD1 and accompanying document titled, "Environmental Assessment – Proposed Machinery Shed Minor Modification to Project Approval 06_0030, August 2009"; and d) conditions of this approval. <p><i>Note: The general layout of the project is shown in the figure in Appendix 1.</i></p> | <p>The Proponent is considered to be operating generally in accordance with items a), b), c) and d).</p> <p>A comparatively small number of non-compliances were identified as noted throughout this audit report and addressed elsewhere.</p> | <p>Compliant</p> | <p>Refer to recommendations as noted against individual conditions within the audit report.</p> |
| <p>3. If there is any inconsistency between the documents referred to above, the conditions of this approval shall prevail to the extent of the inconsistency.</p> | <p>No inconsistency between documents referred to identified.</p> | <p>Compliant</p> | |
| <p>4. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:</p> <ul style="list-style-type: none"> a) any reports, plans, programs or correspondence that are submitted in accordance with this approval; and b) the implementation of any actions or measures contained in these reports, plans, programs or correspondence. | <p>Ramtech advised that following the NSW Department of Planning and Environment Sand Quarry Audit Campaign in 2015, an action plan was developed to address non-compliances identified during the audit. An Action Plan was prepared in response to this audit report and submitted to the Department on 15 February 2016. Following further discussion, the Department acknowledged acceptance of an updated Action Plan on 19 February 2016.</p> <p>Ramtech are currently working through completion of these items.</p> | <p>Non-Compliant</p> | <p>Continue implementation of the Action Plan to transition nominated conditions to compliance.</p> |

| <p style="text-align: center;">SCHEDULE 2 ADMINISTRATIVE CONDITIONS</p> | <p style="text-align: center;">Comment</p> | <p style="text-align: center;">Compliance Status</p> | <p style="text-align: center;">Recommendations</p> |
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| <p>Limits on Approval</p> <p>5. Sand extraction operations may take place until 1 January 2035.</p> <p><i>Note: Under this Approval, the Proponent is required to rehabilitate and revegetate the site to the satisfaction of the Director-General. Consequently, this approval will continue to apply in all other respects other than the right to conduct quarrying operations until the site has been rehabilitated and revegetated to a satisfactory standard.</i></p> | <p>Timeframe nominated for approved sand extraction operations has not elapsed as yet.</p> | <p>Compliant</p> | |
| <p>6. The Proponent shall not extract to a depth of more than 12 m below the natural ground surface.</p> <p><i>Notes: The Department acknowledges that this limit may have a variance of +/- 1m.</i></p> | <p>Hydrographic survey plan dated 3/11/14 indicates that the depth of extraction has not gone beyond 12m below natural ground level. This is the most recent survey data.</p> <p>Ramtech advised that the depth of extraction is typically around 8m depth but may go down to 11m.</p> | <p>Compliant</p> | <p>Consideration be given to undertaking hydrographic survey on a regular basis (e.g. annual) to assist in determining compliance with this condition.</p> |
| <p>7. The Proponent shall not transport more than 300,000 tonnes of sand material a year from the site.</p> | <p>Loadrite scale system is installed in loaders. A 3 docket system is used to record sand transported from the site. Dockets are issued to the customer, to the office and are in the end of day summary report.</p> <p>Ramtech provided sales summary data for review. July 13 to June 14 indicates sales of 147,118.95 tonnes and July 14 to June 15 indicate sales of 44,110.68 tonnes.</p> | <p>Compliant</p> | |
| <p>8. The Proponent shall ensure that heavy vehicle movements (in and out) associated with the project do not exceed 8 per hour.</p> | <p>Loadrite system records vehicle movements. Quarry staff visually monitor heavy vehicle movements and site can be closed temporarily if 8 movements is reached. Dockets report for 30 May 2016 observed. Vehicle movements were observed to be less than 8 per hour during the audit.</p> | <p>Compliant</p> | |
| <p>Management Plans/Monitoring Programs</p> <p>9. With the approval of the Director-General, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis</p> | <p>Environmental Management Strategy, Environmental Monitoring Programs and Management Plans were approved on 19 June 2009.</p> <p>An amendment was subsequently approved on 30 August 2011.</p> <p>Correspondence dated 11 July 2012 was submitted to the Department seeking approval of amendments to pages 58-65, page 306 and page 311. Written confirmation of acceptance of these amendments was not available, however Ramtech consultants Planit have stated that all amendments were in accord with agreed positions negotiated with the Department at that time.</p> | <p>Compliant</p> | <p>Confirmation in writing be sought from the Department of their approval of amendments requested in 11 July 2012 correspondence.</p> |

| <p style="text-align: center;">SCHEDULE 2 ADMINISTRATIVE CONDITIONS</p> | <p style="text-align: center;">Comment</p> | <p style="text-align: center;">Compliance Status</p> | <p style="text-align: center;">Recommendations</p> |
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| <p>Structural Adequacy</p> <p>10. The Proponent shall ensure that any new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.</p> <p><i>Notes:</i></p> <ul style="list-style-type: none"> • Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works. • Part 8 of the EP&A Regulation sets out the requirements for the certification of the project. | <p>Proposed Machinery Shed approval in place but not constructed. DA lodged with Council 22/6/09. Site Classification report for proposed shed prepared 13/07/2009</p> <p>22/7/09 DoP confirmed that building was exempt development under SEPP.</p> <p>Ramtech advised removable shipping containers are currently utilized as offices with no BCA approval required.</p> | <p>Compliant</p> | |
| <p>Demolition</p> <p>11. The Proponent shall ensure that all demolition work is carried out in accordance with AS 2601-2001: <i>The Demolition of Structures</i>, or its latest version.</p> | <p>No demolition has occurred to date on site.</p> | <p>Not Applicable</p> | |
| <p>Operation of Plant and Equipment</p> <p>12. The Proponent shall ensure that all plant and equipment used at the site is:</p> <ol style="list-style-type: none"> a) Maintained in a proper and efficient condition; and b) Operated in a proper and efficient manner. | <p>Quarry supervisor advised there are Prestart checks every morning, and plant & equipment are serviced at regular intervals.</p> <p>Dunloe Sands Sand Quarry Safety Management Plan observed and included documentation on Plant & Equipment Maintenance. Maintenance record for dredge and Pre-Start check sheet for Front End Loader provided.</p> <p>Plant & equipment appeared to be operated in a proper and efficient manner at the time of the audit. Evidence of staff plant operation licences observed.</p> | <p>Compliant</p> | |
| <p>Section 94 Contributions</p> <p>13. Prior to carrying out any development, or as otherwise agreed by Council, the Proponent shall pay Council \$47,250 in accordance with Council's Tweed Road Contribution Plan and \$399.40 in accordance with Tweed Council Section 94 Plan No.18.</p> | <p>Bank transaction record for transfer of \$47,649.40 on 22 December 2009 observed.</p> | <p>Compliant</p> | |

| <p align="center">SCHEDULE 3</p> <p align="center">ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p align="center">Comment</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> | | | | |
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| <p>GENERAL EXTRACTION AND PROCESSING PROVISIONS</p> <p>Identification of Boundaries</p> <p>1. Within 1 month of the date of approval of the Landscape Management Plan (see condition 27 below), the Proponent shall:</p> <p>a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction;</p> <p>b) submit a survey plan of these boundaries to the Director-General; and</p> <p>c) ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff and inspecting officers to clearly identify those limits.</p> <p><i>Note: The limit of extraction includes the area described in the EA and shown conceptually on the plan in Appendix 1.</i></p> | <p>a) Extraction boundary surveyed by NC White & Associates dated 14/02/2008.</p> <p>b) The above referenced survey was submitted to the Director-General in correspondence dated 28 March 2008 (Appendix 8).</p> <p>c) Survey markers identifying boundaries were observed on site. The boundaries were recently re-surveyed by NC White & Associates at 50m centres, rather than the previous 100m intervals.</p> | <p>Compliant</p> | | | | | |
| <p>NOISE</p> <p>Impact Assessment Criteria</p> <p>2. The Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 1.</p> <table border="1" data-bbox="215 895 734 994"> <thead> <tr> <th>Receiver Location</th> <th>Day LAeq (15 min) dB(A)</th> </tr> </thead> <tbody> <tr> <td>Residences on privately-owned land</td> <td>48</td> </tr> </tbody> </table> <p><i>Table 1: Noise Impact Assessment Criteria</i></p> <p>Notes:</p> <ul style="list-style-type: none"> Noise from the site is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary, to determine compliance with the identified noise limits, except where otherwise specified below. Where it can be demonstrated that direct measurement of noise from the project is impractical, alternative means of determining compliance may be acceptable (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise level where applicable. The identified noise emission limits apply under meteorological conditions of wind speed up to 3m/s at 10 metres above ground level, and temperature inversion conditions. | Receiver Location | Day LAeq (15 min) dB(A) | Residences on privately-owned land | 48 | <p>The most recent Annual Environmental Monitoring Report (AEMR) available whilst titled July 2015 to December 2015, contains information for December 2014 to December 2015.</p> <p>The AEMR indicates site operations were inaudible above background noise, however there is no acoustic data provided to identify what the background level was.</p> <p>The AEMR indicates that noise monitoring has been undertaken on a monthly basis since January 2015 between the hours of 7.30am and 9am at the locations identified in the EMP Noise Management Plan.</p> <p>Ramtech advised that there have been no noise complaints received to date.</p> | <p>Compliant</p> | <p>Recommend inclusion in report of background noise levels measured and/or comment on the acoustic range of noise monitoring equipment utilized if readings are below the level of detection.</p> |
| Receiver Location | Day LAeq (15 min) dB(A) | | | | | | |
| Residences on privately-owned land | 48 | | | | | | |

| <p align="center">SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p align="center">Comment</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> | | | | | | | | | | | | | |
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| <p>Hours of Operation</p> <p>3. The Proponent shall comply with the operating hours in Table 2.</p> <table border="1" data-bbox="174 432 819 727"> <thead> <tr> <th><i>Activity</i></th> <th><i>Day</i></th> <th><i>Time</i></th> </tr> </thead> <tbody> <tr> <td rowspan="3">Sand extraction and processing, delivery and distribution, and other quarry related activities</td> <td>Monday – Friday</td> <td>7:00am to 5:00pm</td> </tr> <tr> <td>Saturday</td> <td>7:00am to 12:00pm</td> </tr> <tr> <td>Sunday and Public Holidays</td> <td>Nil</td> </tr> <tr> <td>Maintenance (if inaudible at neighbouring residences)</td> <td>Any day</td> <td>Any time</td> </tr> </tbody> </table> <p align="center"><i>Table 2: Operating Hours</i></p> | <i>Activity</i> | <i>Day</i> | <i>Time</i> | Sand extraction and processing, delivery and distribution, and other quarry related activities | Monday – Friday | 7:00am to 5:00pm | Saturday | 7:00am to 12:00pm | Sunday and Public Holidays | Nil | Maintenance (if inaudible at neighbouring residences) | Any day | Any time | <p>A sample of Loadrite dockets were reviewed and indicated operations were occurring within the nominated hours.</p> <p>Ramtech advised that hours of operation are typically Monday – Friday 7am to 4pm and they occasionally operated on a Saturday till 12pm. Gates shut when not open.</p> | <p align="center">Compliant</p> | |
| <i>Activity</i> | <i>Day</i> | <i>Time</i> | | | | | | | | | | | | | | |
| Sand extraction and processing, delivery and distribution, and other quarry related activities | Monday – Friday | 7:00am to 5:00pm | | | | | | | | | | | | | | |
| | Saturday | 7:00am to 12:00pm | | | | | | | | | | | | | | |
| | Sunday and Public Holidays | Nil | | | | | | | | | | | | | | |
| Maintenance (if inaudible at neighbouring residences) | Any day | Any time | | | | | | | | | | | | | | |
| <p>Continuous Improvement</p> <p>4. The Proponent shall:</p> <ol style="list-style-type: none"> implement all reasonable and feasible best practice noise mitigation measures; investigate ways to reduce the noise generated by the project; and report on these investigations and the implementation and effectiveness of these measures in the AEMR, to the satisfaction of the Director-General. | <p>The Dunloe Sands EMP (July 2012) contains a Noise Management & Monitoring Plan which outlines noise management strategies including restriction of hours of operation, trucks are fitted with residential mufflers and maintained, dredge is fitted with a residential muffler, bund in place around extraction area, speed restrictions in place on site and buffer zones provided around operations.</p> <p>As noted above, muffler systems are in place on the dredge and other plant utilized on-site.</p> <p>The AEMR observed indicates noise monitoring has been undertaken monthly since January 2015 and that site operations have consistently been inaudible above background noise.</p> | <p align="center">Compliant</p> | | | | | | | | | | | | | | |

| <p align="center">SCHEDULE 3</p> <p align="center">ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p align="center">Comment</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> | | | | | | | | | | | | | | | |
|--|---|--|--|--|---------|----------------------|-----------|------------------|-----------|--|--------|----------------------|--|--------|---------------------|---|-----------------------------|--|
| <p>Noise Monitoring Program</p> <p>5. The Proponent shall prepare and implement a Noise Monitoring Program for the project to the satisfaction of the Director-General. This program must:</p> <ul style="list-style-type: none"> a) be submitted to the Director-General prior to carrying out any development on the site; b) be prepared in consultation with the DECCW; c) include details of how the noise performance of the project would be monitored, and include a noise monitoring protocol for evaluating compliance with the relevant noise limits in this approval; and d) include a protocol of monitoring haulage truck noise on Pottsville Road. | <ul style="list-style-type: none"> a) NMP submitted prior to operation as part of the Dunloe Sands EMP. Department approval granted on 19th June 2009. Formal commencement of operations occurred in October 2010. Whilst full implementation (i.e. noise monitoring) did not commence until 2015, this is now in place. b) EMP approval letter (19/6/2009) acknowledges sufficient opportunity for consultation was provided. c) Addressed within Section 7.2 of EMP (July 2012). d) Section 7.2 of the Dunloe Sands EMP (July 2012) indicates monitoring will also be undertaken on Pottsville Mooball Road in accord with the environmental criteria for road traffic noise. Ramtech consultants Planit advised that noise monitoring is undertaken monthly on Pottsville Road in accord with the EMP and initial start-up acoustic report by CRG. | <p>Compliant</p> | | | | | | | | | | | | | | | | |
| <p>AIR QUALITY</p> <p>Impact Assessment Criteria</p> <p>6. The Proponent shall ensure that dust generated by the project does not cause additional exceedances of the criteria listed in Tables 3 to 5 at any privately owned land.</p> <table border="1" data-bbox="152 1066 779 1182"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>24 hour</td> <td>50 µg/m³</td> </tr> </tbody> </table> <p><i>Table 3: Short Term Impact Assessment Criteria for Particulate Matter</i></p> <table border="1" data-bbox="152 1230 779 1422"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> <td>90 µg/m³</td> </tr> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>Annual</td> <td>30µg/m³</td> </tr> </tbody> </table> <p><i>Table 4: Long Term Impact Assessment Criteria for Particulate Matter</i></p> | Pollutant | Averaging period | Criterion | Particulate matter < 10 µm (PM ₁₀) | 24 hour | 50 µg/m ³ | Pollutant | Averaging period | Criterion | Total suspended particulate (TSP) matter | Annual | 90 µg/m ³ | Particulate matter < 10 µm (PM ₁₀) | Annual | 30µg/m ³ | <p>No dust monitoring results were identified within the AEMR observed for the previous 12 months. Ramtech advised that dust monitoring did not commence until 2015. Results provided relate to analysis reports dated 1/10/2015, 9/12/2015, 10/5/2016 and 31/5/2016 and address deposited dust only and not particulate matter.</p> <p>It is noted that a request to amend monitoring within the approved EMP is currently in progress. An extract of the scope of amendments under discussion between the Department and ASK was observed. Ramtech advised the proposed amendment will request a reduction in the PM10 monitoring until such time a production increases to over 200,000T. TSP monitoring proposed to continue whilst production is less than 200,000T.</p> | <p>Non-Compliant</p> | <p>Implement dust monitoring in accordance with current approved EMP until such time as an amendment is approved by DoP.</p> |
| Pollutant | Averaging period | Criterion | | | | | | | | | | | | | | | | |
| Particulate matter < 10 µm (PM ₁₀) | 24 hour | 50 µg/m ³ | | | | | | | | | | | | | | | | |
| Pollutant | Averaging period | Criterion | | | | | | | | | | | | | | | | |
| Total suspended particulate (TSP) matter | Annual | 90 µg/m ³ | | | | | | | | | | | | | | | | |
| Particulate matter < 10 µm (PM ₁₀) | Annual | 30µg/m ³ | | | | | | | | | | | | | | | | |

| SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS | | | | Comment | Compliance Status | Recommendations | | | | | | | | |
|--|------------------|--|---------------------------|--|-------------------|---|-------------------------|----------------|--------|---------------------------|---------------------------|--|--|--|
| <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Maximum increase in deposited dust level</th> <th>Maximum total deposited</th> </tr> </thead> <tbody> <tr> <td>Deposited dust</td> <td>Annual</td> <td>2 g/m² /month</td> <td>4 g/m² /month</td> </tr> </tbody> </table> <p><i>Table 5: Long Term Impact Assessment Criteria for Deposited Dust</i></p> <p><i>Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 1991, AS/NZS 3580.10.1-2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.</i></p> | | | | Pollutant | Averaging period | Maximum increase in deposited dust level | Maximum total deposited | Deposited dust | Annual | 2 g/m ² /month | 4 g/m ² /month | | | |
| Pollutant | Averaging period | Maximum increase in deposited dust level | Maximum total deposited | | | | | | | | | | | |
| Deposited dust | Annual | 2 g/m ² /month | 4 g/m ² /month | | | | | | | | | | | |
| <p>Dust Monitoring Program</p> <p>7. The Proponent shall prepare and implement a Dust Monitoring Program for the project to the satisfaction of the Director-General. This program must:</p> <ul style="list-style-type: none"> a) be submitted to the Director-General prior to carrying out any development on the site; b) be prepared in consultation with DECCW; and c) include details of how the air quality performance of the project would be monitored, and include a protocol for evaluating compliance with the relevant air quality criteria in this approval. <p><i>Note: Initially, this program may concentrate on monitoring the dust deposition impacts of the project. However, in time, it may be expanded to include other pollutants.</i></p> | | | | <p>a) DMP submitted prior to operation as part of the Dunloe Sands EMP. Department approval granted on 19th June 2009. Formal commencement of operations occurred in October 2010. Dust monitoring did not commence until 2015, and a request to amend monitoring within the approved EMP is currently being prepared.</p> <p>Results provided relate to analysis reports dated 1/10/2015, 9/12/2015, 10/5/2016 and 31/5/2016 and address deposited dust only and not particulate matter.</p> <p>b) EMP approval letter (19/6/2009) acknowledges sufficient opportunity for consultation was provided.</p> <p>c) Addressed within Section 7.3 of EMP (July 2012). Ramtech advised that they have undertaken a review of the DMP and a request to amend monitoring within the approved EMP is currently being prepared.</p> | Non-Compliant | Implement dust monitoring in accordance with current approved EMP until such time as an amendment is approved by DoP. | | | | | | | | |
| <p>SOIL AND WATER Discharges</p> <p>8. Except as may be expressly provided for by an EPL, the Proponent shall not discharge any water from the project or ancillary operational areas. The Proponent shall ensure that the extraction pit subject to dredging is maintained and operated to prevent discharges of any surface water from these ponds.</p> | | | | <p>Ramtech advise that there have been nil discharges to date. The dredge pond appeared to be maintained with water contained within the ponds at the time of the audit. Flood bunding was observed to be in place as required by Schedule 5 Condition 13 for certain flood conditions. A plan showing the As Constructed perimeter bund and top of bund surface heights dated 10/7/2016 was observed.</p> | Compliant | | | | | | | | | |

| SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS | | | Comment | Compliance Status | Recommendations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------------------------------------|--------------------------|-----------|-------------------|--------------------------|-----------|-----|--------|----|----|-----------|----------------|------|----|----------|-------|--------|------------------|------|----|---------------|------|------|-------------------|------------------|-------|-------------|------------------|------|----------------------------|------------------------------|---------|--------------------------------------|----|--------|------|-----|---------------|------|----|---------------|------|-----|--------------|------|------|--------------|------|-----|-----------------|------|-----|------------------|------|----|-----------------------|------|-----|--------------|------|----|--|----------------------|---|
| <p>Water Quality Objectives</p> <p>9. The Proponent shall aim to meet the water quality objectives in Table 6 for water in the dredge ponds and in groundwater adjacent the dredge ponds, unless otherwise approved by the Director-General.</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Unit of Measure</th> <th>Water Quality Objectives</th> </tr> </thead> <tbody> <tr> <td>Turbidity</td> <td>NTU</td> <td>5 - 20</td> </tr> <tr> <td>pH</td> <td>pH</td> <td>6.5 – 8.5</td> </tr> <tr> <td>Oil and Grease</td> <td>mg/L</td> <td>10</td> </tr> <tr> <td>Salinity</td> <td>µS/cm</td> <td><3,000</td> </tr> <tr> <td>Dissolved oxygen</td> <td>mg/L</td> <td>>6</td> </tr> <tr> <td>Chlorophyll-a</td> <td>µg/L</td> <td>2-10</td> </tr> <tr> <td>Faecal coli forms</td> <td>Median No./100mL</td> <td><1000</td> </tr> <tr> <td>Enterococci</td> <td>Median No./100mL</td> <td><230</td> </tr> <tr> <td rowspan="2">Algae and blue-green algae</td> <td>No. Cells/mol (M.aeruginosa)</td> <td><50,000</td> </tr> <tr> <td>mm³/L (total biovolume)</td> <td><4</td> </tr> <tr> <td>Sodium</td> <td>mg/L</td> <td>500</td> </tr> <tr> <td>Potassium ion</td> <td>mg/L</td> <td>40</td> </tr> <tr> <td>Magnesium ion</td> <td>mg/L</td> <td>100</td> </tr> <tr> <td>Chloride ion</td> <td>mg/L</td> <td>1000</td> </tr> <tr> <td>Sulphate ion</td> <td>mg/L</td> <td>800</td> </tr> <tr> <td>Bicarbonate ion</td> <td>mg/L</td> <td>400</td> </tr> <tr> <td>Soluble Iron ion</td> <td>mg/L</td> <td>20</td> </tr> <tr> <td>Soluble aluminium ion</td> <td>mg/L</td> <td>0.5</td> </tr> <tr> <td>Ammonium ion</td> <td>mg/L</td> <td>20</td> </tr> </tbody> </table> | | | Pollutant | Unit of Measure | Water Quality Objectives | Turbidity | NTU | 5 - 20 | pH | pH | 6.5 – 8.5 | Oil and Grease | mg/L | 10 | Salinity | µS/cm | <3,000 | Dissolved oxygen | mg/L | >6 | Chlorophyll-a | µg/L | 2-10 | Faecal coli forms | Median No./100mL | <1000 | Enterococci | Median No./100mL | <230 | Algae and blue-green algae | No. Cells/mol (M.aeruginosa) | <50,000 | mm ³ /L (total biovolume) | <4 | Sodium | mg/L | 500 | Potassium ion | mg/L | 40 | Magnesium ion | mg/L | 100 | Chloride ion | mg/L | 1000 | Sulphate ion | mg/L | 800 | Bicarbonate ion | mg/L | 400 | Soluble Iron ion | mg/L | 20 | Soluble aluminium ion | mg/L | 0.5 | Ammonium ion | mg/L | 20 | <p>It is noted that in 2012, Ramtech engaged Hydrosphere to undertake a review of the water quality monitoring program for the Dunloe Sands operation. Correspondence dated 26/4/12 from the Department approved some of the requested changes and requested Ramtech seek formal approval of the revised monitoring schedule.</p> <p>The EMP Revision July 2012 was reviewed and it is noted that Interim Target Criteria are identified for the parameters in Table 6.</p> <p>The most recent Annual Environmental Monitoring Report (AEMR) was reviewed and contained results for the previous 12 months (Dec 014 – Dec 2015).</p> <p><u>Surface Water Sampling</u> EMP July 2012 identifies rainfall event-based and quarterly monitoring for pH, EC, temperature, suspended solids, dissolved oxygen, total nitrogen & total phosphorous.</p> <p>There are 4 surface water locations – SW3, SW4, SW9 & SW10.</p> <p>Surface Water Interim Target Criteria are identified in Section 7.4.9 Surface Water Management Plan (Surrounding Environment) of the EMP.</p> <p>Section 3.2 of the AEMR confirms quarterly sampling was undertaken but no rainfall event-based sampling was noted. It was also noted that the interim target criteria referenced for some parameters (pH, EC, DO & TN) did not reflect the interim criteria as indicated in Section 7.4.9 Surface Water Management Plan (Surrounding Environment) of the EMP. Rather Interim Target Criteria identified in Section 7.4.8 Surface Water Quality Management/Monitoring Program (Including Blue Green Algae Management) – On-Site Lakes has been referenced.</p> <p>Exceedances were identified against the Section 7.4.9 Interim Criteria for pH, EC, DO, SS & TN. Refer to Tables 11, 12, 13 & 16 of AEMR.</p> <p>Quarterly monitoring for pH, EC, temperature, REDOX potential, dissolved oxygen, groundwater level, calcium, magnesium, sodium, potassium, bicarbonate, sulfate, chloride, filterable iron, aluminium and arsenic.</p> <p>There are 5 groundwater locations – DLP1, DLP3, DLP5, DLP6 & DLP7.</p> <p>Exceedances were identified against monthly results for pH, EC and DO at some locations.</p> | <p>Non-Compliant</p> | <p>Suitable water quality monitoring equipment be available to staff to allow for in-situ monitoring as per the EMP at all times of operation.</p> <p>Develop a process for calibration of in-situ monitoring equipment and maintain records of calibration occurring.</p> <p>Review the AEMR format to ensure relevant Interim Targets are reflected and all required information is presented in the reports.</p> |
| Pollutant | Unit of Measure | Water Quality Objectives | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Turbidity | NTU | 5 - 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| pH | pH | 6.5 – 8.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil and Grease | mg/L | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salinity | µS/cm | <3,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissolved oxygen | mg/L | >6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chlorophyll-a | µg/L | 2-10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Faecal coli forms | Median No./100mL | <1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Enterococci | Median No./100mL | <230 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Algae and blue-green algae | No. Cells/mol (M.aeruginosa) | <50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | mm ³ /L (total biovolume) | <4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sodium | mg/L | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Potassium ion | mg/L | 40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnesium ion | mg/L | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chloride ion | mg/L | 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sulphate ion | mg/L | 800 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bicarbonate ion | mg/L | 400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Soluble Iron ion | mg/L | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Soluble aluminium ion | mg/L | 0.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ammonium ion | mg/L | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Table 6: Water Quality Objectives

| <p style="text-align: center;">SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p style="text-align: center;">Comment</p> | <p style="text-align: center;">Compliance Status</p> | <p style="text-align: center;">Recommendations</p> |
|---|---|---|---|
| <p>Notes:</p> <ul style="list-style-type: none"> • <i>The objectives for dissolved oxygen, turbidity and algae are relevant to surface water only.</i> • <i>The Department acknowledges that short term exceedances of these objectives may occur during natural events such as flooding.</i> • <i>The Department acknowledges that pre-existing water quality may not meet the objectives for some analytes, including salinity. The proponent shall strive to meet the water quality objectives through implementation of the Soil and Water Management Plan (see condition 18 below), as far as is reasonable and feasible and within the Proponent's control, to the satisfaction of the Director-General.</i> | <p>Exceedances were identified against quarterly results for all parameters tested at some locations.</p> <p>Results for aluminium, bicarbonate and alkalinity are not discussed within the AEMR reviewed, however it is noted that analysis has been undertaken on some Tweed Laboratory Centre Reports.</p> <p><u>Lake Water Sampling</u> EMP July 2012 identifies monthly monitoring for pH, EC, dissolved oxygen, turbidity and oil & grease.</p> <p>EMP July 2012 identifies quarterly monitoring for the above parameters and magnesium, sodium, potassium, bicarbonate, sulfate chloride, filterable iron, aluminium, manganese, arsenic and chlorophyll a.</p> <p>EMP July 2012 identifies quarterly vertical monitoring at 1 metre intervals for pH, EC, temperature and dissolved oxygen.</p> <p>Lake sample is taken at 1 location at 1 metre depth intervals.</p> <p>Interim Target Criteria are identified in Section 7.4.8 Surface Water Quality Management/Monitoring Program (Including Blue Green Algae Management) – On-Site Lakes.</p> <p>Exceedances were identified against monthly results including turbidity & DO.</p> | | |

| <p align="center">SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p align="center">Comment</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
|---|---|--|--|
| <p>Fines Management</p> <p>10. The Proponent shall ensure that all excavated potential acid sulfate soil fines material is returned back to below the watertable as soon as possible to prevent oxidation.</p> <p>No potential acid sulfate soil shall be removed from the site, unless adequately neutralised in accordance with methods approved under the Soil and Water Management Plan.</p> | <p>Observation at the time of the audit was that fines from the wash-plant are discharged to an initial fore-bay pond prior to discharging via a pipe into the re-internment pond. Quarry staff move pipe location based on visual monitoring.</p> <p>Section 7.4.3 of the approved EMP outlines the ASS Management Plan (within the Soil and Water Management Plan). This includes a process for identification, treatment and verification sampling of PASS.</p> <p>Section 7.4.4 of the approved EMP outlines the process for ASS identification for dry excavated material.</p> <p>Section 7.4.5 of the approved EMP commits to no material will be transported off site until validation tests indicate compliance with acceptance criteria based on the action levels of oxidisable sulfur as stated in the ASSMAC Guidelines.</p> <p>Ramtech advised that some fines material is incorporated into products when needed and is subject to lime treatment to reduce the potential risk of acid sulfate leaching. No evidence of verification sampling having occurred was provided at the time of the audit.</p> <p>It was also advised that dry extracted topsoil is used at times as part of the Tweed Shire Council Drain Filling Project.</p> <p>Exceedance of the action criteria were observed in ASS sample results dated 18/12/2009, 14/7/2010 and 21/9/2010.</p> | <p align="center">Non-Compliant</p> | <p>Implement a process to demonstrate that the fines are not 'potential acid sulfate soil fines' or are adequately neutralised in accordance with the approved Soil and Water Management Plan.</p> |
| <p>11. The Proponent shall ensure that all potential acid sulfate soil fines material is discharged into the pond at a depth of no less than 3 metres from the water surface, and that all fines are deposited to a final depth of at least 8 metres from the water surface, unless an alternative method(s) is approved by OOW and the Director-General.</p> | <p>Observation at the time of the audit was that fines are discharged via a pipe into the re-internment pond at a point less than 3 metres from the water surface as evidenced by the vegetation growth immediately adjacent the discharge location. The depth of pipe is fixed from the starting point based on the water level at that time. Quarry staff move pipe location based on visual monitoring.</p> <p>No record of depth of fines re-internment is taken.</p> | <p align="center">Non-Compliant</p> | <p>1.Recommend a review of Fines Management including the method in which potential ASS fines are placed at depths in accordance with Schedule 3 Condition 11.</p> <p>2.Undertake refresher training with Quarry staff on the requirements of PA06_0030.</p> |

| SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS | Comment | Compliance Status | Recommendations |
|---|--|-------------------|--|
| <p>Wastewater Treatment</p> <p>12. The Proponent shall manage on-site sewage to the satisfaction of Council and DECCW. The facility must comply with the requirements of the <i>Environment and Health Protection Guidelines – On-site Sewage Management for Single Households (1998)</i>.</p> | <p>Tweed Shire Council Approval to Install an On-site Sewage Management System dated 26/05/2009 was provided.</p> | Compliant | |
| <p>Flood Management</p> <p>13. The Proponent shall ensure that flood bunding around the Stage 1 and Stage 2 works does not exceed 300 mm in height above natural surface level, to a maximum height of 2.0 m AHD, unless otherwise approved by the Director-General.</p> | <p>Ramtech advised that flood bund is in place around Stage 1 to a maximum height of 2.0m AHD. Stage 2 has not commenced as yet, therefore bunding is not yet required around Stage 2.</p> <p>A survey plan dated 10/7/2015 showing the As Constructed perimeter bund and top of bund surface heights was observed and indicates the bund (where required) is at a maximum height of 2.0m AHD.</p> | Compliant | |
| <p>14. The Proponent shall ensure that perimeter drainage must be installed and operational prior to the construction of bunding or the placement of fill on site.</p> | <p>Ramtech advised that prior to operations, existing drainage channels were in place on land outside the extraction area that drain naturally to the creek.</p> | Compliant | |
| <p>15. All earthworks, including flood and acoustic bunding works, shall be contained wholly within the site.</p> | <p>Ramtech advised that latest survey plan indicates earthworks are wholly within the site.</p> <p>A survey plan dated 10/7/2015 showing the As Constructed perimeter bund and top of bund surface heights was observed and indicates earthworks and bunding are wholly contained within the site.</p> | Compliant | |
| <p>16. The Proponent shall cease dredging and processing activities not less than 24 hours prior to the commencement of overflow from any dredge pond. No dredging or processing shall occur when the dredge ponds are overflowing.</p> | <p>Ramtech advised that no overflow has occurred from the dredge pond to date.</p> | Not Applicable | |
| <p>17. The Proponent shall ensure that the flood storage capacity of the site is no less than the pre-existing flood storage capacity at all stages of the project. Details of the available flood storage capacity shall be reported in the AEMR.</p> | <p>The most recent Annual Environmental Monitoring Report (AEMR) available covered the period December 2014 to December 2015 was reviewed and did not contain information on the available flood storage capacity of the site.</p> | Non- Compliant | <p>Incorporate flood storage capacity information into the AEMR.</p> |

| <p align="center">SCHEDULE 3</p> <p align="center">ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p align="center">Comment</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>Management and Monitoring</p> <p>18. The Proponent shall prepare and implement a Soil and Water Management Plan for the project to the satisfaction of the Director-General. This plan must:</p> <p>a) be prepared in consultation with OOW check and DECCW;</p> <p>b) include a:</p> <ul style="list-style-type: none"> • Water Balance; • Erosion and Sediment Control Plan; • Acid Sulfate Soil Management Plan; • Blue-Green Algae Management Plan; • Surface Water Monitoring Program; and • Groundwater Monitoring Program; and <p>c) be submitted to the Director-General prior to starting quarrying operations, and prior to carrying out any development site in the case of the Erosion and Sediment Control Plan.</p> | <p>SWMP submitted prior to operation as part of the Dunloe Sands EMP. EMP approved on 19 June 2009, with an amendment approved in August 2011. Further amendments were negotiated in 2012.</p> <p>a) EMP approval letter (19/6/2009) acknowledges sufficient opportunity for consultation was provided. Correspondence from DECC date 23 Nov 2007 provided.</p> <p>b) Requested Water Balance, Management Plans and Monitoring Programs contained in EMP as follows:</p> <ul style="list-style-type: none"> - Section 7.4.1 - Section 7.4.2 - Section 7.4.3 - Section 7.4.7 & 7.4.8 - Section 7.4.8 & 7.4.9 - Section 7.4.10 <p>c) SWMP submitted prior to operation as part of the Dunloe Sands EMP. EMP approved on 19 June 2009. Formal commencement of operations occurred in October 2010.</p> | <p>Compliant</p> | |
| <p>19. The Water Balance shall include:</p> <p>a) details of all water extracted, transferred, used and/or discharged by the quarry;</p> <p>b) the source of all water collected or stored on the site, including rainfall, stormwater and groundwater; and</p> <p>c) measures to minimise water use by the project.</p> | <p>A Water Balance is provided in Section 7.4.1 of the approved EMP and addresses items a), b) and c).</p> <p>It is noted that the majority of the process water will be continuously recycled and available for reuse.</p> | <p>Compliant</p> | |

| <p style="text-align: center;">SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p style="text-align: center;">Comment</p> | <p style="text-align: center;">Compliance Status</p> | <p style="text-align: center;">Recommendations</p> |
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| <p>20. The Erosion and Sediment Control Plan shall:</p> <ul style="list-style-type: none"> a) be consistent with the requirements of <i>Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition, 2004 (Landcom)</i>, and Council's codes including its Code of Practice for Soil and Water Management on Construction Sites, Development Design Specification D7 – Stormwater Quality and Tweed Urban Stormwater Quality Management Plan; b) identify activities that could cause soil erosion and generate sediment; c) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters; d) describe the location, function, and capacity of erosion and sediment control structures; and e) describe what measures would be implemented to maintain these structures over time. | <p>An Erosion and Sediment Control Plan is provided in Section 7.4.2 of the approved EMP and addresses items a), b), c), d) and e).</p> | <p>Compliant</p> | |
| <p>21. The Acid Sulfate Soil Management Plan shall:</p> <ul style="list-style-type: none"> a) be consistent with the <i>NSW Acid Sulphate Soil Advisory Committee's Acid Sulfate Soil Manual</i>; and b) define procedures for managing the potential acid sulfate soils on the site, including sample testing and procedures. | <p>An Acid Sulfate Soil Management Plan is provided in Section 7.4.3 of the approved EMP and is separated into three parts being ASS identification, ASS treatment and Extraction and Processing of Sands.</p> <p>Section 7.4.4 of the approved EMP relates to ASS identification in dry excavated material.</p> <p>Section 7.4.5 of the approved EMP relates to ASS Treatment.</p> <p>Section 7.4.6 of the approved EMP relates to Extraction and Processing of Sands.</p> | <p>Compliant</p> | |

| <p align="center">SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p align="center">Comment</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>22. The Blue-Green Algae Management Plan shall:</p> <ul style="list-style-type: none"> a) be prepared by a suitably qualified blue-green algae expert, whose appointment has been approved by the Director-General; b) be consistent with extant guidelines for blue-green algae management including the NHMRC's <i>Guidelines for Managing Risks in Recreational Water</i>; c) describe the measures that would be implemented to prevent and control the sources of algal blooms over the short, medium and long term; and d) define procedures for the management and notification of identified algal blooms. | <p>A Blue Green Algae Management Plan (BGAMP) is provided in Section 7.4.7 of the approved EMP. Amendment to the BG Algae MP to reduce monitoring during cooler months was approved on 30/8/2011. Ramtech advised that the BGAMP is currently under review again with a proposed amendment being prepared for submission to the Department.</p> <ul style="list-style-type: none"> b) The BG Algae MP was prepared initially by Dr Paul Wright of the Tweed Laboratory Centre as part of the EMP approved in 2009. The amendment to the BG Algae MP approved by the Department in 2011 was also prepared by Dr Paul Wright. c) BG Algae MP notes that extraction area is not classified as 'recreation waterbody' in accord with NHMRC. Modified alert levels and monitoring requirement are incorporated in the approved BG Algae MP. d) Measures outlined in BGAMP. A review of the AEMR December 2014 to December 2015 indicates monitoring is undertaken monthly. Approved BGAMP identifies fortnightly monitoring during rather than monthly from October to April. Whilst not in the AEMR reviewed, Ramtech have advised that fortnightly monitoring commenced on 25/1/2016 and continued until 29/4/2016. A sample of analysis results were provided and results for 25/1/2016 and 25/2/2016 indicate results for chlorophyta greater than 500 cells/ML. e) Addressed within the BGAMP, including guidelines for cyanobacterial alert levels, monitoring requirements and recommended actions. | <p align="center">Non-Compliant</p> | <p>Implement monitoring requirements as outlined in current approved Blue Green Algae Management Plan until such time as an amendment to this condition is approved.</p> |
| <p>23. The Surface Water Monitoring Program shall include:</p> <ul style="list-style-type: none"> a) detailed baseline data on surface water quality; b) surface water impact assessment criteria; c) a program to monitor surface water flows and quality; d) a program to manage water releases from the site; e) a program to monitor bank and bed stability; and f) a protocol for the investigation, notification and mitigation of identified exceedances of the surface water impact assessment criteria. | <p>A Surface Water Monitoring Program is provided in Section 7.4.8 and Section 7.4.9 of the approved EMP. Items a), b), c), d), e) and f) are addressed within Sections 7.4.8 and 7.4.9.</p> | <p align="center">Compliant</p> | |

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| <p>24. The Ground Water Monitoring Program shall include:</p> <ul style="list-style-type: none"> a) detailed baseline data on groundwater levels and quality, based on statistical analysis; b) groundwater impact assessment criteria; c) a program to monitor ground water levels and quality; d) a program to monitor ground water level effects on vegetation, and on ground water supply to adjoining properties; and e) a protocol for the investigation, notification and mitigation of identified exceedances of the groundwater impact assessment criteria. | <p>A Ground Water Monitoring Program is provided in Section 7.4.10 of the approved EMP. Items a), b), c), and e) are addressed within Sections 7.4.10.</p> <p>Item d) is not specifically addressed within the Groundwater Monitoring Program.</p> <p>It is noted that in 2012, Ramtech engaged Hydrosphere to undertake a review of the water quality monitoring program for the Dunloe Sands operation. Correspondence dated 26/4/12 from the Department approved some of the requested changes and requested Ramtech seek formal approval of the revised monitoring schedule.</p> | <p align="center">Non-Compliant</p> | <p>Implement monitoring requirements as outlined in current approved Ground Water Management Plan until such time as an amendment to this condition is approved</p> |
| <p>REHABILITATION AND LANDSCAPING</p> <p>Rehabilitation and Revegetation</p> <p>25. The Proponent shall rehabilitate the site to the satisfaction of the Director-General.</p> | <p>Progressive rehabilitation and Revegetation was observed to be undertaken at the site. Other parties to determine whether it is to the satisfaction of the Director General, however, no evidence was observed to determine that it wasn't.</p> | <p align="center">Compliant</p> | |
| <p>26. The Proponent shall:</p> <ul style="list-style-type: none"> a) rehabilitate and revegetate the 15 ha hectares of land identified in the EA (see the revegetation plan in Appendix 2); and b) within 12 months of the commencement of quarrying operations, make suitable arrangements to provide appropriate long term security for the revegetation area to ensure it is managed for conservation purposes to the satisfaction of the Director-General. | <ul style="list-style-type: none"> a) Rehabilitation and Revegetation Management Plan contained in Appendix C of approved EMP. Section 23.0 details Site Rehabilitation. b) Long term arrangements for the security of the revegetation land has not been finalized. It is noted however that development of a master planned long term strategy for the site including security of the revegetation land is in progress. <p>It was noted that progress reports of the rehabilitation are included in the AEMR.</p> | <p align="center">Non-Compliant</p> | <p>Continue development of long term arrangements for security of the revegetation land to progress finalisation as soon as possible.</p> |

| <p style="text-align: center;">SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p style="text-align: center;">Comment</p> | <p style="text-align: center;">Compliance Status</p> | <p style="text-align: center;">Recommendations</p> |
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| <p>Landscape Management Plan</p> <p>27. The Proponent shall prepare and implement a Landscape Management Plan for the project to the satisfaction of the Director-General. This plan must:</p> <p>a) be prepared:</p> <ul style="list-style-type: none"> • by suitably qualified consultants, including a specialist hydrologist, coastal engineer, wetlands ecologist and landscape architect; • in consultation with Council, OOW, DECCW, DII-Fisheries and the CCC; and • in accordance with extant guidelines including the OOW's <i>Constructed Wetlands Manual, Volumes 1 and 2</i> and the DII's <i>Policy and Guidelines: Aquatic Habitat Management, 1999</i>; <p>b) be submitted to the Director-General prior to starting quarrying operations on the site; and</p> <p>c) include a:</p> <ul style="list-style-type: none"> • Rehabilitation and Revegetation Management Plan; and • Long Term Management Strategy. <p><i>Note: The Department accepts that the initial Landscape Management Plan may not include the detailed Long Term Management Strategy. However, a conceptual strategy must be included in the initial plan, along with a timetable for augmentation of the strategy with each subsequent review of the plan.</i></p> | <p>A Landscape Management Plan is provided in Section 7.6 of the approved EMP. Appendix C of the approved EMP provides a detailed Rehabilitation & Revegetation Management Plan.</p> <p>a) Department approval of the EMP was granted on 19th June 2009. This correspondence also endorses specialist consultants (Planit) for the preparation of the Landscape Management Plan (LMP).</p> <p>This letter also acknowledges sufficient opportunity for consultation was provided.</p> <p>There is no reference within the LMP that it was prepared in accordance with the reference guidelines, however it is inferred by the Department's approval of the LMP that it is generally in accordance with the guidelines.</p> <p>b) The EMP (including the LMP) was submitted prior to quarrying operation with Director's approval granted on 19th June 2009. Formal commencement of operations occurred in October 2010.</p> <p>c) Rehabilitation & Revegetation Management Plan prepared by Plaintiff Consulting is contained in Appendix C of the approved EMP. A Long Term Management Strategy is outlined in Section 3.4 of the EMP.</p> | <p>Compliant</p> | |

| <p align="center">SCHEDULE 3</p> <p align="center">ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p align="center">Comment</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>28. The Rehabilitation and Revegetation Management Plan must include:</p> <ul style="list-style-type: none"> a) the rehabilitation objectives for the site and revegetation areas; b) a description of the short, medium, and long term measures that would be implemented to: <ul style="list-style-type: none"> • rehabilitate and stabilise the site; • implement the revegetation strategy; and • manage the remnant vegetation and habitat on the site and in the revegetation areas; c) detailed performance and completion criteria for the rehabilitation and stabilisation of the site and implementation of the revegetation strategy; d) a detailed description of how the performance of the rehabilitation of the quarry and the revegetation areas would be monitored over time to achieve the stated objectives; e) a detailed description of what measures would be implemented over the next 5 years to rehabilitate and manage the landscape of the site and revegetation areas including the procedures to be implemented for: <ul style="list-style-type: none"> • progressively rehabilitating and stabilising areas disturbed by quarrying; • implementing revegetation and regeneration within the disturbance areas and revegetation areas; • protecting areas outside the disturbance areas, including SEPP 14 wetlands and SEPP26 littoral rainforests; • vegetation clearing protocols; • managing impacts on fauna; • controlling terrestrial and aquatic weeds and pests; • controlling access; • bushfire management; and • reducing the visual impacts of the project; f) a description of the potential risks to successful rehabilitation and/or revegetation, and a description of the contingency measures that would be implemented to mitigate these risks; and g) details of who is responsible for monitoring, reviewing, and implementing the plan. | <ul style="list-style-type: none"> a) Section 4 of Appendix C outlines the Rehabilitation/Revegetation Strategy for the site. This is further supported by monitoring processes outlined in Section 4.4 including criteria for assessing the condition of revegetated sites in Forms A to D. b) Addressed in the Rehabilitation & Revegetation Management Plan prepared by Plaint Consulting is contained in Appendix C of the approved EMP. c) Addressed in Section 7.6 of the approved EMP. d) As per item b). e) Addressed in Section 3 and Section 4 of Appendix C. f) Addressed in Section 7.6 and Appendix C of the approved EMP. g) Identified in Section 7.6 of the approved EMP as the Site Manager. Monitoring is also undertaken by specialist consultants as part of the AEMR process. | <p>Compliant</p> | |

| <p style="text-align: center;">SCHEDULE 3</p> <p style="text-align: center;">ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p style="text-align: center;">Comment</p> | <p style="text-align: center;">Compliance Status</p> | <p style="text-align: center;">Recommendations</p> |
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| <p>29. The Long Term Management Strategy must:</p> <ul style="list-style-type: none"> a) define the objectives and criteria for quarry closure and post-extraction management; b) investigate options for the future use of the site; c) describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the project; and d) describe how the performance of these measures would be monitored over time. | <p>A Long Term Management Strategy is provided in Section 3.4 of the approved EMP. Items a), b), c) and d) are addressed within Section 3.4.</p> <p>Ramtech have advised that a Master Planning exercise is underway for future residential development of the quarry site and adjoining properties. A number of management plans within the EMP along for continued monitoring of the effects of the operation post closure (e.g. surface water & groundwater monitoring).</p> | <p>Compliant</p> | |
| <p>Rehabilitation Bond</p> <p>30. Prior to starting quarrying operations on the site, the Proponent shall lodge a rehabilitation bond for the project with the Director-General. The sum of the bond shall be calculated at:</p> <ul style="list-style-type: none"> a) \$2.50/m² for the total area to be disturbed and/or revegetated in each 5-year review period (see condition 31 below); and b) \$1.50/m² for the total area of land previously disturbed and/or rehabilitated by the project, to the satisfaction of the Director-General. <p><i>Notes:</i></p> <ul style="list-style-type: none"> • <i>If the rehabilitation and revegetation works are completed to the satisfaction of the Director-General, the Director-General will release the rehabilitation bond.</i> • <i>If the rehabilitation and revegetation works are not completed to the satisfaction of the Director-General, the Director-General will call in all or part of the rehabilitation bond, and arrange for the satisfactory completion of the relevant works.</i> | <p>Rehabilitation Bank Guarantee record dated 25th January 2010 for \$130,000 was observed.</p> <p>DoP correspondence dated 25/2/10 approved bond amount was calculated in accordance with this condition. (5.2 hectares at \$2.50/m²).</p> | <p>Compliant</p> | |

| <p align="center">SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p align="center">Comment</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>31. Within 6 months of each Independent Environmental Audit (see condition 6 of schedule 5) excluding the inaugural audit, unless the Director-General directs otherwise, the Proponent shall review, and if necessary revise, the sum of the rehabilitation bond to the satisfaction of the Director-General. This review must consider:</p> <ul style="list-style-type: none"> a) the effects of inflation; b) any changes to the total area of disturbance; and c) the performance of the rehabilitation and revegetation to date. | <p>The inaugural Independent Environmental Audit was conducted on 30 May 2016, therefore no review has been undertaken to date.</p> | <p>Not Applicable</p> | <p>The inaugural IEA was intended to occur within 2 years of commencement of operation, and every 5 years thereafter. An IEA did not occur within 2 years of commencement, rather the inaugural audit was in 2016. .</p> <p>Ramtech to note the opportunity to review the rehabilitation bond following an IEA and clarify appropriate timeframes for this with the Department.</p> |
| <p>ABORIGINAL CULTURAL HERITAGE</p> <p>Aboriginal Cultural Heritage Management Plan</p> <p>32. The Proponent shall prepare and implement an Aboriginal Cultural Heritage Management Plan to the satisfaction of the Director-General. This plan must:</p> <ul style="list-style-type: none"> a) be prepared in consultation with DECCW and all relevant Aboriginal communities; b) be submitted to the Director-General for approval prior to commencement of construction; and c) include a: <ul style="list-style-type: none"> • program for additional archaeological survey/s of the disturbance area; • description of the measures that would be implemented to salvage any identified Aboriginal sites within the disturbance area; • description of the measures that would be implemented to protect any Aboriginal sites outside the disturbance area; and • description of the measures that would be implemented if any new Aboriginal objects or skeletal remains are discovered during the project. | <p>An Aboriginal Cultural Heritage Management Plan is provided in Section 7.7 of the approved EMP.</p> <ul style="list-style-type: none"> a) Correspondence dated 2/9/2009 observed confirming the Aboriginal community has been consulted in accordance with the DECCW's <i>Interim Community Consultation Requirements for Applicants</i> (2005) or other such consultation guidelines that may supersede these requirements. b) Submitted on 3 September 2009 prior to formal commencement of operations in October 2010. ABCHMP approval advised in email 24 September 2009 with supporting correspondence posted. c) Adequately addressed within Aboriginal Cultural Heritage Management Plan. | <p>Compliant</p> | |

| <p align="center">SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS</p> | <p align="center">Comment</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>TRAFFIC AND TRANSPORTATION</p> <p>Road Haulage</p> <p>33. Prior to commencement of operations the Proponent shall:</p> <ul style="list-style-type: none"> a) design and construct the haul road and its intersection with Pottsville-Mooball Road; and b) install advanced truck turning warning signage along Pottsville-Mooball Road, to the satisfaction of Council. | <ul style="list-style-type: none"> a) Haul road observed to be provided. As constructed haul road plans dated 25 May 2009 were observed. b) Signage observed. | <p align="center">Compliant</p> | |
| <p>34. The Proponent shall ensure that all loaded vehicles entering or leaving the site have their loads covered.</p> | <p>Dunloe Park Load Covering Policy dated September 2010 was observed. This policy indicates that due to WH&S Act requirements, if you do not have a mechanical device to cover your load, then you are NOT allowed to cover your load on Dunloe Park Property. Ramtech further clarified that the site is defined as within the shaker grid and that as such drivers with non-mechanical devices are directed by quarry staff to cover their loads directly outside of the site (i.e. beyond the shaker grid) and before they exit the Dunloe Park property approximately 2.3km away onto Pottsville Rd.</p> | <p align="center">Compliant</p> | <p>Recommend the Dunloe Park Load Covering Policy be reviewed to clarify the acceptable locations for load covering.</p> <p>Recommend clarification be sought from the DoP regarding implication of WH&S Act on this condition. Seek modification of condition if appropriate.</p> |
| <p>35. The Proponent shall ensure all loaded vehicles leaving the site are cleaned of materials that may fall on the road before they are allowed to leave the site.</p> | <p>Shaker grid observed on-site and approximately 2.3km of paved haul road prior to exiting the site.</p> | <p align="center">Compliant</p> | |
| <p>Parking</p> <p>36. The Proponent shall provide sufficient parking on-site for all project-related traffic and visitors, in accordance with Council's parking codes and to the satisfaction of the Director-General. No on street parking shall be undertaken.</p> | <p>Sufficient parking provisions observed on-site. No on-street parking undertaken.</p> | <p align="center">Compliant</p> | |
| <p>VISUAL IMPACT</p> <p>Visual Amenity</p> <p>37. The Proponent shall minimise the visual impacts of the project to the satisfaction of the Director-General.</p> | <p>A Landscape Management Plan is provided in Section 7.6 of the approved EMP. Appendix C of the approved EMP provides a detailed Rehabilitation & Revegetation Management Plan.</p> <p>Rehabilitation and Revegetation was observed to be undertaken at the site. The extraction area is not visible from the Pottsville-Mooball Road due to the natural topography.</p> | <p align="center">Compliant</p> | |

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| <p>38. The Proponent shall establish and subsequently maintain the vegetated buffer around the extraction area within 12 months of the date of this approval.</p> <p>Note: the vegetation buffer shall be detailed in the Landscape Management Plan</p> | <p>The area surrounding the extraction area was observed to be predominately grassed with natural vegetation maintained in the riparian zones of adjacent stormwater/drainage channels.</p> <p>The Landscape Management Plan in Section 7.6 of the approved EMP indicates a 5-10metre wide visual buffer is to be provided around extraction ponds on completion of extraction operations.</p> | <p align="center">Compliant</p> | |
| <p>Lighting Emissions</p> <p>39. The Proponent shall:</p> <ul style="list-style-type: none"> a) take all practicable measures to mitigate off-site lighting impacts from the project; and b) ensure that all external lighting associated with the project complies with <i>Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting</i>, to the satisfaction of the Director-General. | <p>The site is not operational at night time and the audit was conducted during daylight hours. Ramtech advise that no lights are on that could cause a nuisance to neighbouring properties.</p> | <p align="center">Compliant</p> | |
| <p>Advertising</p> <p>40. The Proponent shall not erect or display any advertising structure(s) or signs on the site without the written approval of the Director-General.</p> <p><i>Note: This does not include business identification, traffic management and safety or environmental signs.</i></p> | <p>A site identification sign was observed near the site entrance. No advertising signage was observed.</p> | <p align="center">Compliant</p> | |
| <p>WASTE MANAGEMENT</p> <p>41. The Proponent shall minimise the amount of waste generated by the project to the satisfaction of the Director-General.</p> | <p>A Waste Management Plan (WMP) is provided in Section 7.10 of the approved EMP.</p> <p>It is noted that the WMP indicates weekly waste disposal records will be kept detailing quantities, types of waste and location of disposal. This data would then be incorporated into the AEMR.</p> <p>JJ Richards collects waste on an 'as required' basis. Limited quantities of waste generated on-site, e.g. office waste, packaging etc. Insufficient quantities to make commercial recycling services feasible.</p> <p>Servicing of vehicles occurs off-site.</p> | <p align="center">Compliant</p> | <p>Recommend waste data be incorporated into the AEMR as per the Waste Management Plan.</p> |

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| <p>EMERGENCY AND HAZARDS MANAGEMENT</p> <p>Dangerous Goods</p> <p>42. The Proponent shall ensure that the storage, handling, and transport of dangerous goods are conducted in accordance with the relevant <i>Australian Standards</i>, particularly AS1940 and AS1596, and the <i>Dangerous Goods Code</i>.</p> | <p>Ramtech advised that fuel is stored off-site and that a fuel pod comes on-site for plant re-fuelling.</p> <p>Minor quantities of oil and grease stored on site in a shipping container within the Minor Storage limits of AS1940 (<5000L). Fire extinguisher provided on container door. Spill kit available on-site.</p> | <p align="center">Compliant</p> | |
| <p>Safety</p> <p>43. The Proponent shall secure the project to ensure public safety to the satisfaction of the Director- General.</p> | <p>The site is fenced and the entrance gate is locked at close of business.</p> <p>The site office is positioned at front of site to allow for monitoring of persons entering the site. Quarry staff visual monitoring and interact with any members of the public that enter the site. Induction processes are in place for person attending the site.</p> <p>An Emergency Response Plan has been developed and implemented on-site.</p> | <p align="center">Compliant</p> | |
| <p>Bushfire Management</p> <p>44. The Proponent shall:</p> <ul style="list-style-type: none"> a) ensure that the project is suitably equipped to respond to any fires on-site; and b) assist the rural fire service and emergency services as much as possible if there is a fire on- site. | <p>Ramtech advised that a 3000L fire truck is available on-site to respond to any fires. This truck is also utilized for dust suppression.</p> <p>The Rehabilitation and Revegetation Management Plan contained in Appendix C (Section 4.4) of the approved EMP identifies that existing 4wd tracks within environmental protection zones are to be maintained to allowed for emergency rural fire brigade vehicles. It also indicates a 25-30m slashed/grazed zone is to be maintained on the development side of rehabilitation zones to reduce the risk of bushfire spread.</p> | <p align="center">Compliant</p> | |
| <p>PRODUCTION DATA</p> <p>45. The Proponent shall:</p> <ul style="list-style-type: none"> c) provide annual production data to the DII using the standard form for that purpose; and d) include a copy of this data in the AEMR. | <p>Loadrite scale system is installed in loaders.</p> <p>Ramtech provided a copy of the DII standard form for reporting annual production data for the 2014-2015 period (44,800 tonnes). This represents a small variation to the sales summary data provided for July 14 to June 15 (44,110.68 tonnes).</p> <p>A review of the AEMR for Dec 2014- Dec 2015 indicated that the annual production data was not included. Ramtech have stated that a copy of this production data with be included in future AEMR's.</p> | <p align="center">Non-Compliant</p> | <p>Include the annual production data in the AEMR.</p> |

| <p align="center">SCHEDULE 4 ADDITIONAL PROCEDURES</p> | <p align="center">Comments</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>NOTIFICATION OF LANDOWNERS</p> <p>1. If the results of monitoring required in schedule 3 identify that impacts generated by the project are greater than the relevant impact assessment criteria, then the Proponent shall notify the Director- General, affected landowners, and/or existing or future tenants accordingly, and provide quarterly monitoring results to each of these parties until the results show that the project is complying with the relevant criteria.</p> | <p>A review of PO_0030 indicates Impact Assessment Criteria relates to Noise and Air Quality (Dust). Water Quality Objectives and Interim Target Criteria have been agreed to in the approved EMP for surface water and groundwater, therefore this condition does not apply to water quality monitoring.</p> <p>A review of the AEMR for Dec 2014- Dec 2015 indicated that no exceedance of noise criteria occurred during this period. No dust monitoring results were identified within the AEMR. Ramtech advised that dust monitoring did not commence until 2015 and subsequently provided analysis reports dated 1/10/2015, 9/12/2015, 10/5/2016 and 31/5/2016. Deposited dust results were observed to be below the nominated maximum levels.</p> <p>It is noted that a request to amend dust monitoring within the approved EMP is currently being prepared.</p> | <p align="center">Not Applicable</p> | |
| <p>INDEPENDENT REVIEW</p> <p>2. If a landowner considers that the project is exceeding the impact assessment criteria in schedule 3, then he/she may ask the Director-General in writing for an independent review of the impacts of the project on his/her land.</p> <p>If the Director-General is satisfied that an independent review is warranted, the Proponent shall within 3 months of the Director-General advising that an independent review is warranted:</p> <ul style="list-style-type: none"> a) consult with the landowner to determine his/her concerns b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land, to determine whether the project is complying with the relevant criteria in schedule 3, and identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and c) give the Director-General and landowner a copy of the independent review. | <p>No evidence was observed that a landholder has asked the Director General for an independent review of the impacts of the project on their land.</p> | <p align="center">Not Applicable</p> | |

| <p align="center">SCHEDULE 4 ADDITIONAL PROCEDURES</p> | <p align="center">Comments</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>3. If the independent review determines that the project is complying with the relevant criteria in schedule 3, then the Proponent may discontinue the independent review with the approval of the Director-General.</p> | <p>As immediately above</p> | <p>Not Applicable</p> | |
| <p>4. If the independent review determines that the project is not complying with the relevant criteria in schedule 3, and that the project is primarily responsible for this non-compliance, then the Proponent shall:</p> <ul style="list-style-type: none"> a) implement all reasonable and feasible measures, in consultation with the landowner, to ensure that the project complies with the relevant criteria; and b) conduct further monitoring to determine whether these measures ensure compliance; or c) secure a written agreement with the landowner to allow exceedances of the relevant criteria in schedule 3, to the satisfaction of the Director-General <p>If the additional monitoring referred to above subsequently determines that the project is complying with the relevant criteria in schedule 3, or the Proponent and landowner enter into a negotiated agreement to allow these exceedances, then the Proponent may discontinue the independent review with the approval of the Director-General.</p> | <p>As immediately above</p> | <p>Not Applicable</p> | |
| <p>5. If the landowner disputes the results of the independent review, either the Proponent or the landowner may refer the matter to the Director-General for resolution.</p> <p>If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 4).</p> | <p>As immediately above</p> | <p>Not Applicable</p> | |

| <p align="center">SCHEDULE 5</p> <p align="center">ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS</p> | <p align="center">Comments</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>ENVIRONMENTAL MANAGEMENT STRATEGY</p> <p>1. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must:</p> <ul style="list-style-type: none"> a) be submitted to the Director-General prior to starting quarrying operations on the site; b) be prepared in consultation with the relevant agencies; c) provide the strategic context for environmental management of the project; d) identify the statutory requirements that apply to the project; e) describe in general how the environmental performance of the project would be monitored and managed; f) describe the procedures that would be implemented to: <ul style="list-style-type: none"> • keep the local community and relevant agencies informed about the construction, operation and environmental performance of the project; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise during the life of the project; • respond to any non-compliance; • manage cumulative impacts; and • respond to emergencies; and g) describe the role, responsibility, authority, and accountability of the key personnel involved in the environmental management of the project. | <p>An Environmental Management Strategy (EMS) is provided in Chapter 3 of the approved EMP.</p> <p>An amendment was subsequently approved on 30 August 2011. Further amendments were negotiated in 2012.</p> <ul style="list-style-type: none"> a) Submitted prior to operation with Director's approval granted on 19th June 2009. Formal commencement of operations occurred in October 2010. b) EMP approval letter (19/6/2009) acknowledges sufficient opportunity for consultation was provided. c) Chapter 3 in entirety provides the strategic context of environmental management. d) Chapter 3, Section 3.1 identifies Statutory Requirements. e) Chapter 3, Section 3.2 identifies how environmental performance is monitored and managed. f) Chapter 3, Section 3.3 identifies environmental management procedures. g) Chapter 3, Section 3.3.7 identifies roles, responsibilities and accountabilities for the environmental management of the project. | <p align="center">Compliant</p> | |
| <p>ENVIRONMENTAL MONITORING PROGRAM</p> <p>2. The Proponent shall prepare an Environmental Monitoring Program for the project to the satisfaction of the Director-General. This program must be submitted to the Director-General prior to starting quarrying operations on the site, and consolidate the various monitoring requirements in schedule 3 of this approval into a single document.</p> | <p>The Environmental Management Plan (EMP) integrates environmental monitoring programs for the Dunloe Sands Quarry operations into a single document.</p> <p>This EMP was submitted prior to operation and approval was granted on 19th June 2009. Formal commencement of operations occurred in October 2010.</p> | <p align="center">Compliant</p> | |

| <p align="center">SCHEDULE 5 ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS</p> | <p align="center">Comments</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>INCIDENT REPORTING</p> <p>3. Within 24 hours of detecting an exceedance of the limits/performance criteria in this approval or the occurrence of an incident that causes (or may cause) material harm to the environment, the Proponent shall notify the Department and other relevant agencies of the exceedance/incident.</p> | <p>A review of PAO6_0030 indicates Impact Assessment Criteria relates to Noise and Air Quality (Dust). Water Quality Objectives and Interim Target Criteria have been agreed to in the approved EMP for surface water and groundwater, therefore this condition does not apply to water quality monitoring.</p> <p>A review of the AEMR for Dec 2014- Dec 2015 indicated that no exceedance of noise criteria occurred during this period. No dust monitoring results were identified within the AEMR. Ramtech advised that dust monitoring did not commence until 2015 and subsequently provided analysis reports dated 1/10/2015, 9/12/2015, 10/5/2016 and 31/5/2016. Deposited dust results were observed to be below the nominated maximum levels.</p> <p>It is noted that a request to amend monitoring within the approved EMP is currently being prepared.</p> | <p align="center">Not Applicable</p> | |
| <p>4. Within 6 days of notifying the Department and other relevant agencies of an exceedance/incident, the Proponent shall provide the Department and these agencies with a written report that:</p> <ul style="list-style-type: none"> a) describes the date, time, and nature of the exceedance/incident; b) identifies the cause (or likely cause) of the exceedance/incident; c) describes what action has been taken to date; and d) describes the proposed measures to address the exceedance/incident. | <p>As per the above condition 3.</p> | <p align="center">Not Applicable</p> | |

| <p align="center">SCHEDULE 5 ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS</p> | <p align="center">Comments</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>ANNUAL REPORTING</p> <p>5. Within 12 months of the date of this approval, and annually thereafter, the Proponent shall submit an AEMR to the Director-General and relevant agencies. This report must:</p> <ul style="list-style-type: none"> a) identify the standards and performance measures that apply to the project; b) describe the works carried out in the last 12 months; c) describe the works that will be carried out in the next 12 months; d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years; e) include a summary of the monitoring results for the project during the past year; f) include an analysis of these monitoring results against the relevant: <ul style="list-style-type: none"> • impact assessment criteria/limits; • monitoring results from previous years; and • predictions in the EA; g) identify any trends in the monitoring results over the life of the project; h) identify any non-compliance during the previous year; and i) describe what actions were, or are being, taken to ensure compliance. | <p>PA06_0030 was granted on 24 November 2009. The Dunloe Sands website was reviewed and had available AEMR's as follows:</p> <ul style="list-style-type: none"> • Nov 2010 to April 2011 • May 2011 to Oct 2011 • Nov 2011 to Oct 2012 • Nov 2012 to Oct 2013 • Nov 2013 to Oct 2014 • Nov 2013 to April 2014 • Dec 2014 to June 2015 • Jan 2015 to Dec 2015 <p>A review of the AEMR titled Jan 2015 to Dec 2015 on the webpage provided a document titled "Six Monthly Monitoring for July 2015 – Dec 2015". This AEMR did however contain data for the Dec 2014 to Dec 2015 period.</p> <p>Correspondence provided identified that the AEMR was submitted to DoP on 5 May 2016 and it was considered generally in accordance with MP06_0030. It is noted that the DoP requires future AEMRs are to be submitted no later than 31 March immediately following each respective reporting period.</p> <p>Items a), d), e), g), h) and i) are addressed within the AEMR reviewed. Items b), c) and f) did not appear to be addressed within the AEMR. Ramtech have stated that they are currently reviewing and revising the AEMR at the request of the Department and have committed to submitting an updated version on or before the 14/8/2016.</p> <p>Ramtech consultant PlanIt have stated that they posted AEMR's to relevant agencies, however no additional physical evidence was provided to confirm this at the time of the audit.</p> | <p>Non-Compliant</p> | <p>See Surface Water Condition comments.</p> <p>Ensure all required items are adequately addressed within the AEMR.</p> <p>Ensure the AEMR is submitted within the DoP nominated timeframe and evidence of it being provided to relevant agencies is maintained.</p> |

| <p align="center">SCHEDULE 5 ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS</p> | <p align="center">Comments</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>INDEPENDENT ENVIRONMENTAL AUDIT</p> <p>6. Within 2 years of the start of quarrying operations on site, and every 5 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:</p> <ul style="list-style-type: none"> a) be conducted by a suitably qualified, experienced, and independent person(s) whose appointment has been approved by the Director-General; b) include consultation with the relevant agencies; c) assess the environmental performance of the project, and its effects on the surrounding environment; d) assess whether the project is complying with the relevant standards, performance measures and statutory requirements; e) review the adequacy of any strategy/plan/program required under this approval; and, if necessary, f) recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval. | <p>This audit undertaken by Mark Rigby & Associates (MRA) represents the first Independent Environmental Audit conducted on the Dunloe Sands quarry operations and was not conducted within 2 years from the start of quarrying operations in October 2010.</p> <ul style="list-style-type: none"> a) MRA were approved as suitably qualified, experienced and independent person on 28/4/2016. b) Nominated contacts within relevant agencies were consulted. c) Conditions set within PA06_0030 were placed on the Dunloe Sands quarry operation to set acceptable environmental performance standards. The MRA IEA was conducted against conditions within PA06_0030. d) As per c) e) As per c) f) Recommendations have been provided throughout the IEA report as considered appropriate by MRA. | <p align="center">Non-Compliant</p> | <p>Ensure that future IEA's are undertaken in timeframes nominated by the Director-General.</p> |
| <p>7. Within 1 month of completion of each Independent Environmental Audit, the Proponent shall submit a copy of the audit report to the Director-General and relevant agencies, with a response to any of the recommendations in the audit report.</p> | <p>Future Action - This audit undertaken by Mark Rigby & Associates (MRA) represents the first Independent Environmental Audit conducted on the Dunloe Sands quarry operations.</p> | <p align="center">Not Applicable</p> | <p>Ramtech has 1 month from completion of this IEA audit to submit the audit report with a copy of a response to any recommendations made.</p> |
| <p>8. Following each Independent Environmental Audit, the Proponent shall review and if necessary revise each of the environmental management and monitoring strategies/plans/programs in schedules 3 and 5, to the satisfaction of the Director-General. The revised strategies/plans/programs shall be submitted to the Director-General within 6 months of completing the audit.</p> | <p>Future Action - This audit undertaken by Mark Rigby & Associates (MRA) represents the first Independent Environmental Audit conducted on the Dunloe Sands quarry operations.</p> | <p align="center">Not Applicable</p> | <p>Ramtech are advised that within 6 months of the completion of this IEA, they have the opportunity to review and revise each of the environmental management and monitoring strategies/plans/programs in schedules 3 and 5.</p> |

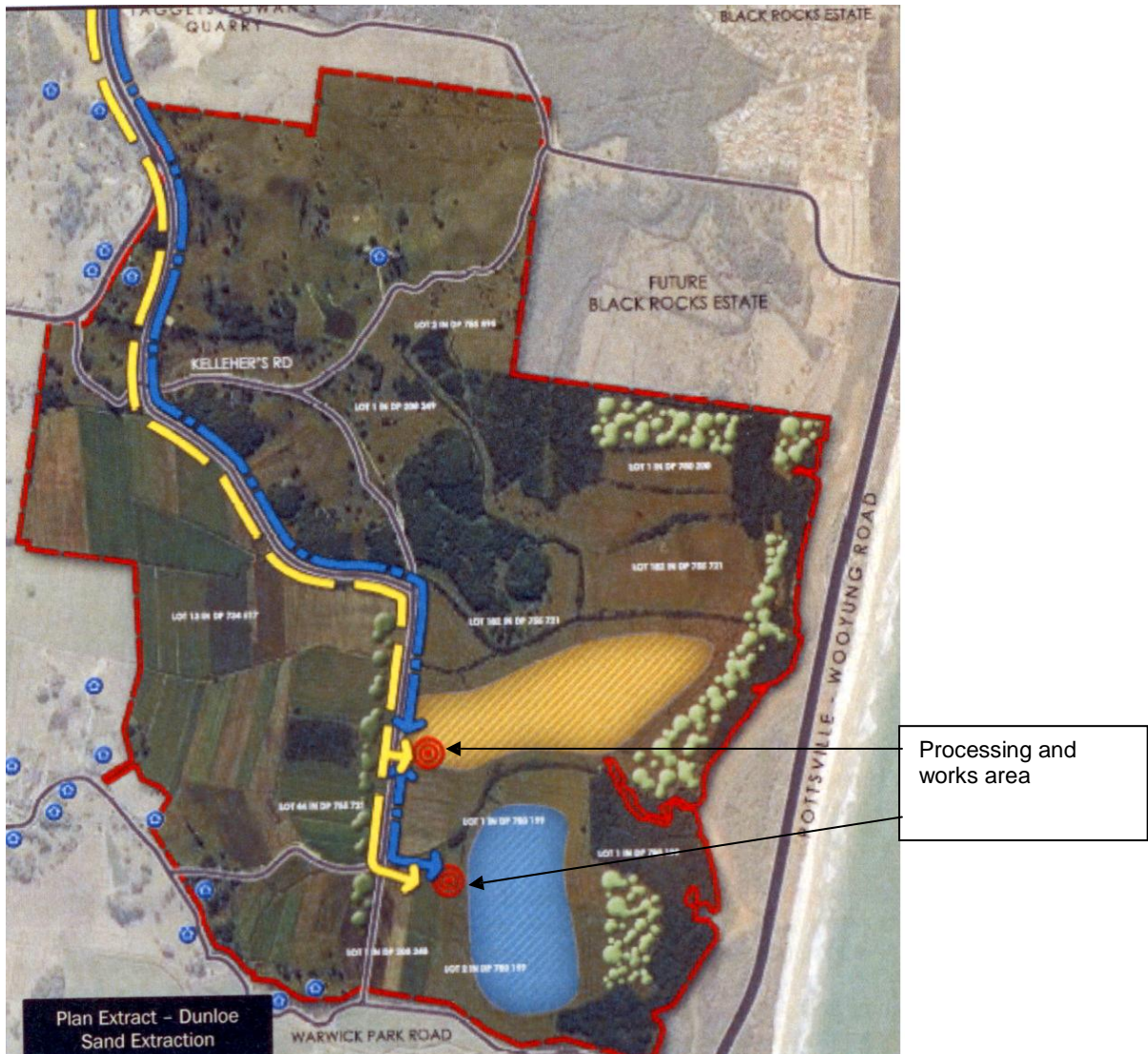
| <p align="center">SCHEDULE 5</p> <p align="center">ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS</p> | <p align="center">Comments</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>COMMUNITY CONSULTATIVE COMMITTEE</p> <p>9. Prior to starting quarrying operations on the site, the Proponent shall establish a CCC for the project. This CCC must be established and operated in accordance with the <i>Guideline for Establishing and Operating Community Consultative Committees for Mining Developments</i>, and to the satisfaction of the Director-General.</p> | <p>CCC membership was approved by DoP DG on 9/7/2009. Minutes from meetings are available on the Dunloe Sands website. Most recent meeting was held on 29/1/2016. Next CCC meeting is scheduled for 28/7/ 2016.</p> <p>Subsequent to that meeting, correspondence dated 4/5/16 from the Department was observed to approve the appointment of Dr John Griffin as the Independent Chair of the CCC. Correspondence was also observed on the consultation with CCC members to the nomination of Dr Griffin which was also submitted with the Department.</p> <p>Discussion with the outgoing CCC Chair Paul Morgan indicated that he had been in communication with the Department regarding committee membership and operation in accordance with the nominated guidelines. Mr Morgan had been involved with seeking approval from the Department for Dave Norris to be a replacement for Ms Chris Cherry on the CCC.</p> | <p align="center">Compliant</p> | |
| <p>ACCESS TO INFORMATION</p> <p>10. Within 1 month of the approval of any plan/strategy/program required under this approval (or any subsequent revision of these plans/strategies/programs), or the completion of any independent environmental audit or AEMR, the Proponent shall:</p> <p>a) provide a copy of the relevant document/s to Tweed Shire Council and relevant agencies; and</p> <p>b) ensure that a copy of the relevant document/s is made publicly available on site and/or at the Proponent's regional office, to the satisfaction of the Director-General</p> | <p>Ramtech consultants Planit advised that this has occurred, however no record/evidence was provided to confirm the EMP and AEMR's was submitted to any other relevant agencies.</p> <p>The Dunloe Sands website was reviewed and had available AEMR's as follows:</p> <ul style="list-style-type: none"> • Nov 2010 to April 2011 • May 2011 to Oct 2011 • Nov 2011 to Oct 2012 • Nov 2012 to Oct 2013 • Nov 2013 to Oct 2014 • Nov 2013 to April 2014 • Dec 2014 to June 2015 • Jan 2015 to Dec 2015 <p>A review of the AEMR titled Jan 2015 to Dec 2015 on the webpage provided a document titled "Six Monthly Monitoring for July 2015 – Dec 2015". This AEMR did however contain data for the Dec 2014 to Dec 2015 period.</p> | <p align="center">Non-Compliant</p> | <p>Ensure that copies of any plan/strategy/program or subsequent revision required under the approval, each AEMR and IEA's are provided to the Tweed Shire Council and relevant agencies within the Department's nominated timeframes.</p> |



| <p align="center">SCHEDULE 5</p> <p align="center">ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS</p> | <p align="center">Comments</p> | <p align="center">Compliance Status</p> | <p align="center">Recommendations</p> |
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| <p>11. During the project, the Proponent shall:</p> <ul style="list-style-type: none"> a) make a summary of monitoring results required under this approval publicly available at the Proponent's regional office; and b) update these results regularly (at least every 3 months), to the satisfaction of the Director-General | <p>Ramtech advised that AEMR's containing monitoring results are available from the Dunloe Sands website and also at their Murwillumbah office located at 30-32 Lundberg Drive, Murwillumbah NSW 2483.</p> <p>Ramtech are currently updating the process for collation of monitoring results to ensure that results will be available on at least a quarterly basis.</p> | <p align="center">Non-Compliant</p> | <p>Ensure that processes are established and implemented to update monitoring results at least quarterly and to the satisfaction of the Director-General.</p> |

APPENDIX 1

PROJECT SITE



APPENDIX 2

REHABILITATION STAGING PLAN





ATTACHMENT A: Director-General approval of Mark Rigby & Associates as independent auditors



**Planning Services
Resource Assessments**

Name: Lauren Evans

Phone: 9228 6311

Email: lauren.evans@planning.nsw.gov.au

Sasha Peterson
Ramtech Pty Ltd
PO Box 1623
Kingscliff NSW 2487

Dear Ms Peterson

**Dunloe Park Sand Quarry (MP 06_0030)
Appointment of Independent Auditor**

I refer to your email dated 27 April 2016, seeking the Secretary's approval of a suitably qualified person to undertake the Independent Environmental Audit for the Dunloe Park Sand Quarry, as required by condition 6 of Schedule 5 of MP 06_0030.

The Department has reviewed the qualifications of Allison Reiser and Mark Rigby of Mark Rigby and Associates and considers that they are suitably qualified and experienced to undertake the audit. Accordingly, the Secretary has approved the appointment of Ms Reiser and Mr Rigby.

Yours sincerely

Howard Reed

28.4.16

Director

Resource Assessments

As nominee of the Secretary

ATTACHMENT B: Photographs from site audit



Photographs 1 & 2: Schedule 3 Condition 11 – Non-compliance due to fines material not being discharged into the pond at a depth of no less than 3m from the water surface and at a final depth of at least 8m.





Photograph 3: Flood bunding and limit of extraction survey marker.



Photograph 4: Sprinkler dust suppression system positioned on bollards.



Photograph 5: Shaker grid located at entrance to operational area.



Photograph 6: Sealed haul road with evidence of recent repair work.



Photograph 7: Fenced natural regeneration area.



Photograph 8: Fenced revegetation area.



Photograph 9: Nest box observed within rehabilitation area.