

Project Approval

Section 75J of the *Environmental Planning and Assessment Act 1979*

I approve the project application referred to in schedule 1, subject to the conditions in schedules 2 to 5.

The reason for these conditions is to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the on-going environmental management of the project.

The Hon Kristina Keneally MP
Minister for Planning

Sydney

2008

SCHEDULE 1

Project Application:

06_0030

Proponent:

Ramtech Pty Ltd

Approval Authority:

Minister for Planning

Land:

Lot 1 DP208249; Lot 182 DP755721; Lot 183 DP755721; Lot 44 DP755721; Lot 81 DP755721; Lot 162 DP755721; Lot 2 DP 780199; Lot 1 DP780199; Lot 1 DP780200; Lot 2 DP785895

Project:

Dunloe Park Sand Project

Blue text represents the Machinery Shed Modification MOD 1 – September 2009

Green text represents the increase in hourly truck movements modification MOD 2 – November 2018

TABLE OF CONTENTS

DEFINITIONS	3
SCHEDULE 2 ADMINISTRATIVE CONDITIONS	5
Obligation to Minimise Harm to the Environment	5
Terms of Approval	5
Limits on Approval	5
Staging, Combining and Updating Strategies, Plans or Programs	5
Application of Existing Strategies, Plans or Programs	6
Structural Adequacy	6
Demolition	6
Operation of Plant and Equipment	6
Road Maintenance Contributions	6
Compliance	6
Evidence of Consultation	6
SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS	7
General Extraction and Processing Provisions	7
Noise	7
Air Quality	8
Soil and Water	9
Rehabilitation and Landscaping	12
Aboriginal Cultural Heritage	14
Traffic and Transportation	14
Visual Impact	15
Waste Management	15
Emergency and Hazards Management	16
Production Data	16
SCHEDULE 4 ADDITIONAL PROCEDURES	17
Notification of Landowners	17
Independent Review	17
SCHEDULE 5 ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS	16
Environmental Management	16
Environmental Monitoring Program	19
Incident Reporting	19
Annual Review	19
Independent Environmental Audit	20
Community Consultative Committee	20
Access to Information	20
APPENDIX 1: PROJECT SITE	22
APPENDIX 2: REHABILITATION STAGING PLAN	23
APPENDIX 3: STATEMENT OF COMMITMENTS	24
APPENDIX 4: Deleted	

DEFINITIONS

Annual Review	The review required by condition 5 of Schedule 5
AHD	Australian Height Datum
BCA	Building Code of Australia
CCC	Community Consultative Committee
Conditions of approval	Conditions contained in Schedules 2 to 5 inclusive
Council	Tweed Shire Council
Day	The period from 7.00am to 5.00pm, Monday to Friday, and 8.00am to 1.00pm on Saturdays
Department	Department of Planning and Environment
Dol	Department of Industry – Lands and Water
DPI Fisheries	Fisheries Division of the Department of Primary Industries
DRG	Division of Resources and Geoscience of the Department
EA	Environmental Assessment of the project titled <i>Environmental Assessment Part 3A – Environmental Planning and Assessment Act, 1979, Dunloe Sands – Ramtech P/L, prepared by PLANIT Consulting dated 17 September 2007</i> , including the response to issues raised in submissions, dated March 2008
EA (MOD 1)	Environmental Assessment of the project titled ‘Environmental Assessment - Proposed Machinery Shed Minor Modification to Project Approval 06_0030, August 2009’
EA (MOD 2)	Environmental Assessment of the project titled ‘Dunloe Sands Quarry Modification to Project Approval 06/-0030 Environmental Assessment’, dated July 2017 and the Proponent’s response to submissions document dated November 2017
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence under the <i>Protection of the Environment Operations Act 1997 (POEO Act)</i>
Feasible	Feasible relates to engineering considerations and what is practical to build
Heavy Vehicle	A vehicle that has a Gross Vehicle Mass or Aggregate Trailer Mass of more than 4.5 tonnes
Incident	A set of circumstances that: <ul style="list-style-type: none"> • causes or threatens to cause material harm to the environment; and/or • breaches or exceeds the limits or performance measures/criteria in this approval
Land	As defined in the EP&A Act, except where the term is used in the noise and air quality conditions in Schedules 3 and 4 of this approval, where it is defined as the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval
Material harm to the environment	Is harm that: <ul style="list-style-type: none"> • involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or • results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment) <p>This definition excludes “harm” that is authorised under either this approval or any other statutory approval</p>
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the project
Modification 2	The modification to the project as described in EA (MOD 2)
POEO Act	<i>Protection of the Environment Operations Act 1997</i>

Privately-owned land	Land that is not owned by a public agency or a quarrying company
Project	The development as described in the EA
Proponent	Ramtech Pty Ltd, or its successors in title
Quarrying operations	The extraction, processing, stockpiling and transportation of extractive materials carried out on the site and the associated removal of vegetation, topsoil and overburden
Quarry products	Includes all saleable quarry products, but excludes tailings, other wastes and rehabilitation material
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the development to a good condition and for the purpose of establishing a safe, stable and non-polluting environment
RMS	Roads and Maritime Services
Secretary	Planning Secretary under the EP&A Act, or nominee
SEPP	State Environmental Planning Policy
Statement of Commitments	The Proponent's commitments in Appendix 3
Site	Land to which the Project Approval applies

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

Obligation to Minimise Harm to the Environment

1. In addition to meeting the specific performance measures and criteria established under this approval, the Proponent must implement all reasonable and feasible measures to prevent, and if prevention is not reasonable and feasible, minimise any material harm to the environment that may result from the construction and operation of the project, and any rehabilitation required under this approval.

Terms of Approval

2. The Proponent must carry out the project generally in accordance with the:
 - (a) EA, EA (MOD 1) and EA (MOD 2); and
 - (b) Statement of Commitments.

Notes:

- *The general layout of the project is shown in Appendix 1; and*
- *The Statement of Commitments is reproduced in Appendix 3.*

- 2A. The Proponent must carry out the project in accordance with the conditions of this approval.
3. If there is any inconsistency between the documents referred to above, the conditions of this approval shall prevail to the extent of any inconsistency.
4. The Proponent **must** comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of:
 - (a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with the conditions of this approval;
 - (b) any reviews, reports or audits undertaken or commissioned by the Department regarding compliance with the conditions of this approval; and
 - (c) the implementation of any actions or measures contained in these documents.

Limits on Approval

5. Sand extraction operations may take place until 1 January 2035.

Note: Under this Approval, the Proponent is required to rehabilitate and revegetate the site to the satisfaction of the Secretary. 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.
6. The Proponent **must** not extract to a depth of more than 12 m below the natural ground surface.

Note: The Department acknowledges that this limit may have a variance of +/- 1m.
7. The Proponent **must** not transport more than 300,000 tonnes of quarry products in any financial year from the site.
8. The Proponent **must** ensure that heavy vehicle movements (in and out) associated with the project do not exceed 24 per hour.

Staging, Combining and Updating Strategies, Plans or Programs

9. With the approval of the Secretary, the Proponent may:
 - (a) prepare and submit any strategy, plan or program required by this approval on a staged basis (if a clear description is provided as to the specific stage and scope of the project to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);
 - (b) combine any strategy, plan or program required by this approval (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and

- (c) update any strategy, plan or program required by this approval (to ensure the strategies, plans and programs required under this approval are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the project).
- 9A. If the Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this approval.

Application of Existing Strategies, Plans or Programs

- 9B. The Proponent must continue to apply existing management strategies, plans or monitoring programs approved prior to the approval of Modification 2, until the approval of a similar plan, strategy or program following the approval of Modification 2.

Structural Adequacy

10. The Proponent **must** 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.

Notes:

- 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.

Demolition

11. The Proponent **must** ensure that all demolition work is carried out in accordance with AS 2601-2001: *The Demolition of Structures*, or its latest version.

Operation of Plant and Equipment

12. The Proponent **must** ensure that all plant and equipment used at the site is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

Road Maintenance Contributions

13. Prior to increasing heavy vehicle movements (in and out) above eight per hour, the Proponent must pay Council \$182,280 in accordance with Council's Tweed Road Contribution Plan, unless a deferred payment agreement is executed under Council's Business Investment Policy, in which case contributions are to be paid in accordance with that agreement.

Compliance

14. The Proponent must ensure that all employees, contractors and sub-contractors are made aware of, and instructed to comply with, the conditions of this approval relevant to their respective activities.

Evidence of Consultation

15. Where consultation with any public authority is required by the conditions of this approval, the Proponent must:
- (a) consult with the relevant public authority prior to submitting the required document to the Secretary for approval;
 - (b) submit evidence of this consultation as part of the relevant document; and
 - (c) describe how matters raised by the authority have been addressed and any matters not resolved.

**SCHEDULE 3
ENVIRONMENTAL PERFORMANCE CONDITIONS**

GENERAL EXTRACTION AND PROCESSING PROVISIONS

Identification of Boundaries

1. Within 1 month of the date of approval of the Landscape Management Plan (see condition 27 below), the Proponent **must**:
 - (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction;
 - (b) submit a survey plan of these boundaries to the **Secretary**; and
 - (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.

Note: The limit of extraction includes the area described in the EA and shown conceptually on the plan in Appendix 1.

NOISE

Impact Assessment Criteria

2. The Proponent must ensure that the noise generated by the project does not exceed the criteria in Table 1 at any residence on privately-owned land.

Table 1: Noise Impact Assessment Criteria

<i>Receiver Location</i>	<i>Day L_{Aeq} (15 min) dB(A)</i>
R6 and R7	42
R8	48
All other residences	41

Noise generated by the project must be monitored and measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the *NSW Noise Policy for Industry* (EPA, 2017).

The noise criteria in Table 1 do not apply if the Proponent has an agreement with the owner/s of the relevant residence or land to exceed the noise criteria, and the Proponent has advised the Department in writing of the terms of this agreement.

Hours of Operation

3. The Proponent **must** comply with the operating hours in Table 2.

<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

Table 2: Operating Hours

Noise Operating Conditions

4. The Proponent **must**:
 - (a) implement best practice management to minimise the construction, operational and road transportation noise of the development;
 - (b) minimise the noise impacts of the project during meteorological conditions when the noise criteria in this approval do not apply;

- (c) carry out attended noise monitoring (at least every 3 months or as otherwise agreed by the Secretary) to determine whether the project is complying with the relevant conditions of this approval; and
- (d) regularly assess noise monitoring data and modify and/or stop operations on site to ensure compliance with the relevant conditions of this approval to the satisfaction of the Secretary.

Note: Monitoring under this approval is not required at all residences and the use of representative monitoring locations can be used to demonstrate compliance with criteria, if agreed to by the Secretary.

Noise Management Plan

5. Within three months of the approval of Modification 2, the Proponent must prepare a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:
 - (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;
 - (b) be prepared in consultation with the EPA;
 - (c) describe the measures to be implemented to ensure:
 - (i) compliance with the noise criteria and operating conditions in this approval;
 - (ii) best practice management is being employed;
 - (iii) noise impacts of the project are minimised during noise-enhancing meteorological conditions;
 - (d) describe the noise management system; and
 - (e) include a monitoring program to be implemented to measure noise from the project against the noise criteria in Table 1, and which evaluates and reports on the effectiveness of the noise management system on site.

The Proponent must implement the Noise Management Plan as approved by the Secretary.

AIR QUALITY

Impact Assessment Criteria

6. The Proponent must ensure that particulate matter emissions generated by the project do not cause exceedances of the criteria in Table 3 at any residence on privately-owned land.

Table 3: Air quality criteria

Pollutant	Averaging Period	Criterion
Particulate matter < 10 µm (PM ₁₀)	Annual	^{a,c} 30 µg/m ³
	24 hour	^b 50 µg/m ³
Total suspended particulates (TSP)	Annual	^{a,c} 90 µg/m ³
^d Deposited dust	Annual	^b 2 g/m ² /month ^a 4 g/m ² /month

Notes:

- ^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).
- ^b Incremental impact (i.e. incremental increase in concentrations due to the project on its own).
- ^c Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Secretary.
- ^d Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.

Air Quality Operating Conditions

7. The Proponent must:
- (a) implement best management practice to minimise the dust emissions of the project, including routinely watering haul roads being used by heavy vehicles and equipment;
 - (b) regularly assess meteorological and air quality monitoring data to guide the day-to-day planning of operations and implementation of air quality mitigation measures to ensure compliance with the relevant conditions of this approval;
 - (c) minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see Note c to Table 3 above);
 - (d) monitor and report on compliance with the relevant air quality conditions in this approval; and
 - (e) minimise surface disturbance of the site, other than as permitted under this approval, to the satisfaction of the Secretary.

Air Quality Management Plan

- 7A. Within three months of the approval of Modification 2, the Proponent must prepare an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;
 - (b) be prepared in consultation with the EPA;
 - (c) describe the measures to be implemented to ensure:
 - (i) compliance with the air quality criteria and operating conditions in this approval;
 - (ii) best practice management is being employed; and
 - (iii) air quality impacts of the project are minimised during adverse meteorological conditions and extraordinary events;
 - (d) describe the air quality management system; and
 - (e) include an air quality monitoring program that:
 - (i) is capable of evaluating the performance of the project against the air quality criteria;
 - (ii) adequately supports the air quality management system; and
 - (iii) includes a protocol for identifying any air quality-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of these events.

The Project must implement the Air Quality Management Plan as approved by the Secretary.

SOIL AND WATER

Discharges

8. Except as may be expressly provided for by an EPL, the Proponent **must** not discharge any water from the project or ancillary operational areas. The Proponent **must** ensure that the extraction pit subject to dredging is maintained and operated to prevent discharges of any surface water from these ponds.

Water Quality Objectives

9. The Proponent **must** aim to meet the water quality objectives in Table 4 for water in the dredge ponds and in groundwater adjacent the dredge ponds, unless otherwise approved by the Secretary.

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 coliforms	Median No./100mL	<1000
Enterococci	Median No./100mL	<230
Algae and blue-green algae	No.cells/mL (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 4: Water Quality Objectives

Notes:

- *The objectives for dissolved oxygen, turbidity and algae are relevant to surface water only.*
- *The Department acknowledges that short term exceedances of these objectives may occur during natural events such as flooding.*
- *The Department acknowledges that pre-existing water quality may not meet the objectives for some analytes, including salinity. The proponent **must** 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 **Secretary**.*

Fines Management

10. The Proponent **must** ensure that all excavated potential acid sulfate soil fines material is returned back to below the watertable as soon as possible to prevent oxidation. No potential acid sulfate soil **must** be removed from the site, unless adequately neutralised in accordance with methods approved under the Soil and Water Management Plan.
11. The Proponent **must** 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 **Dol** and the **Secretary**.

Wastewater Treatment

12. The Proponent **must** manage on-site sewage to the satisfaction of Council and **EPA**. The facility must comply with the requirements of the *Environment and Health Protection Guidelines – On-site Sewage Management for Single Households (1998)*.

Flood Management

13. The Proponent **must** 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 **Secretary**.
14. The Proponent **must** ensure that perimeter drainage must be installed and operational prior to the construction of bunding or the placement of fill on site.
15. All earthworks, including flood and acoustic bunding works, **must** be contained wholly within the site.

16. The Proponent **must** cease dredging and processing activities not less than 24 hours prior to the commencement of overflow from any dredge pond. No dredging or processing **must** occur when the dredge ponds are overflowing.
17. The Proponent **must** 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 **must** be reported in the **Annual Review**.

Management and Monitoring

18. The Proponent **must** prepare a Soil and Water Management Plan for the project to the satisfaction of the **Secretary**. This plan **must**:
 - (a) be prepared in consultation with **DoI** and **EPA**;
 - (b) include a:
 - 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
 - (c) be submitted to the **Secretary** prior to starting quarrying operations, and prior to carrying out any development **on the site** in the case of the Erosion and Sediment Control Plan.

The Proponent **must** implement the plan as approved by the **Secretary**.

19. The Water Balance **must** include:
 - (a) details of all water extracted, transferred, used and/or discharged by the quarry;
 - (b) the source of all water collected or stored on the site, including rainfall, stormwater and groundwater; and
 - (c) measures to minimise water use by the project.
20. The Erosion and Sediment Control Plan **must**:
 - (a) be consistent with the requirements of *Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition, 2004* (Landcom), 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.
21. The Acid Sulfate Soil Management Plan **must**:
 - (a) be consistent with the *NSW Acid Sulphate Soil Advisory Committee's Acid Sulfate Soil Manual*; and
 - (b) define procedures for managing the potential acid sulfate soils on the site, including sample testing and procedures.
22. The Blue-Green Algae Management Plan **must**:
 - (a) be prepared by a suitably qualified blue-green algae expert, whose appointment has been approved by the **Secretary**;
 - (b) be consistent with extant guidelines for blue-green algae management including the *NHMRC's Guidelines for Managing Risks in Recreational Water*;
 - (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.
23. The Surface Water Monitoring Program **must** include:
 - (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.
24. The Ground Water Monitoring Program **must** include:
- (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.

REHABILITATION AND LANDSCAPING

Rehabilitation and Revegetation

25. The Proponent **must** rehabilitate the site to the satisfaction of the Secretary. This rehabilitation **must** be generally consistent with the proposed rehabilitation activities described in the documents listed in condition 2 of Schedule 2 and comply with the objectives in Table 5.

Table 5: Rehabilitation Objectives

Feature	Objective
All areas of the site affected by the project	<ul style="list-style-type: none"> • Safe • Hydraulically and geotechnically stable • Non-polluting • Fit for the intended post-quarrying land use/s • Final landform integrated with surrounding natural landforms as far as is reasonable and feasible, and minimising visual impacts when viewed from surrounding land
Surface infrastructure	<ul style="list-style-type: none"> • Decommissioned and removed, unless otherwise agreed by the Planning Secretary
Void lake	<ul style="list-style-type: none"> • Water retained on the site maintains long-term water quality objectives fit for the intended post-mining purpose • Water discharged from the site is suitable for receiving waters, aquatic ecology and riparian vegetation

26. The Proponent **must**:
- (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 Secretary.

Landscape Management Plan

27. The Proponent **must** prepare a Landscape Management Plan for the project to the satisfaction of the Secretary. This plan **must**:
- (a) be prepared:
 - by suitably qualified consultants, including a specialist hydrologist, coastal engineer, wetlands ecologist and landscape architect;
 - in consultation with Council, DoI, OEH, DPI Fisheries and the CCC; and
 - in accordance with extant guidelines including the DoI's *Constructed Wetlands Manual, Volumes 1 and 2* and the DPI's *Policy and Guidelines: Aquatic Habitat Management, 1999*;
 - (b) be submitted to the Secretary prior to starting quarrying operations on the site; and
 - (c) include a:

- Rehabilitation and Revegetation Management Plan; and
- Long Term Management Strategy.

The Proponent must implement the plan as approved by the Secretary.

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.

28. The Rehabilitation and Revegetation Management Plan must include:
- the rehabilitation objectives for the site and revegetation areas;
 - a description of the short, medium, and long term measures that would be implemented to:
 - rehabilitate and stabilise the site;
 - implement the revegetation strategy; and
 - manage the remnant vegetation and habitat on the site and in the revegetation areas;
 - detailed performance and completion criteria for the rehabilitation and stabilisation of the site and implementation of the revegetation strategy;
 - 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;
 - 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:
 - 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 SEPP 26 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;
 - 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;
 - details of who is responsible for monitoring, reviewing, and implementing the plan; and
 - a monitoring and reporting program of the project's impacts on Koalas, including road strike, to the satisfaction of the Secretary; and
 - adaptive management options for managing impacts on Koalas, including specific impact triggers, developed in consultation with Council.
29. The Long Term Management Strategy must:
- define the objectives and criteria for quarry closure and post-extraction management;
 - investigate options for the future use of the site;
 - describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the project; and
 - describe how the performance of these measures would be monitored over time.

Rehabilitation Bond

30. Prior to starting quarrying operations on the site, the Proponent **must** lodge a rehabilitation bond for the project with the Secretary. The sum of the bond **must** be calculated at:
- \$2.50/m² for the total area to be disturbed and/or revegetated in each 5 year review period (see condition 31 below); and
 - \$1.50/m² for the total area of land previously disturbed and/or rehabilitated by the project, to the satisfaction of the Secretary.

Notes:

- If the rehabilitation and revegetation works are completed to the satisfaction of the Secretary, the Secretary will release the rehabilitation bond.

- *If the rehabilitation and revegetation works are not completed to the satisfaction of the Secretary, the Secretary will call in all or part of the rehabilitation bond, and arrange for the satisfactory completion of the relevant works.*
31. Within 6 months of each Independent Environmental Audit (see condition 6 of schedule 5) excluding the inaugural audit, unless the Secretary directs otherwise, the Proponent **must** review, and if necessary revise, the sum of the rehabilitation bond to the satisfaction of the Secretary. This review must consider:
- (c) the effects of inflation;
 - (d) any changes to the total area of disturbance; and
 - (e) the performance of the rehabilitation and revegetation to date.

ABORIGINAL CULTURAL HERITAGE

Aboriginal Cultural Heritage Management Plan

32. The Proponent **must** prepare an Aboriginal Cultural Heritage Management Plan to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with OEH and all relevant Aboriginal communities;
 - (b) be submitted to the Secretary for approval prior to commencement of construction; and
 - (c) include a:
 - 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.

The Proponent must implement the plan as approved by the Secretary.

TRAFFIC AND TRANSPORTATION

Road Haulage

33. Prior to commencement of operations the Proponent **must**:
- (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.
34. The Proponent **must** ensure that all loaded vehicles entering or leaving the site have their loads covered.
35. The Proponent **must** 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.

Road Maintenance

- 35A. Within 12 months of approval of Modification 2, unless otherwise agreed by the Secretary, the Proponent must implement and pay the full cost of implementing the recommended treatments listed in Table 3 of the *Independent Road Safety Audit* prepared by Bitzios Consulting and dated 16 October 2017, and outlined in the Proponent's *Response to Road Safety Audit* dated March 2018, to the satisfaction of Council, including any additional line marking and signage requested by Council.

Note: The Proponent must obtain all necessary approvals under section 138 of the Roads Act 1993 from Council before implementing the recommended treatments.

Traffic Management Plan

- 35B. The Proponent must prepare a Traffic Management Plan for the project to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with RMS and Council;

- (b) be submitted to the Secretary for approval prior to the commencement of operations under Modification 2, unless otherwise agreed by the Secretary;
- (c) describe the processes in place for the management of trucks entering and exiting the site;
- (d) include a Drivers' Code of Conduct that details:
 - safe and quiet driving practices that must be used by drivers travelling to and from the quarry;
 - a map of the primary haulage routes highlighting critical locations for application of safe and quiet driving practices, including residential areas and school bus routes;
 - an induction process for drivers and regular toolbox meetings;
 - complaint resolution procedures;
 - any community consultation measures in respect of peak haulage periods; and
 - consideration of seasonal traffic and events;
- (e) describe the measures to be put in place to ensure compliance with the Drivers' Code of Conduct; and
- (f) propose measures to minimise the transmission of dust and tracking of material onto public roads from vehicles leaving the site.

The Proponent must implement the plan as approved by the Secretary.

Parking

- 36. The Proponent **must** 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 Secretary. No on street parking **must** be undertaken.

VISUAL IMPACT

Visual Amenity

- 37. The Proponent **must** minimise the visual impacts of the project to the satisfaction of the Secretary.
- 38. The Proponent **must** establish and subsequently maintain the vegetated buffer around the extraction area within 12 months of the date of this approval.

*Note: The vegetation buffer **must** be detailed in the Landscape Management Plan.*

Lighting Emissions

- 39. The Proponent **must**:
 - (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 *Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting*, to the satisfaction of the Secretary.

Advertising

- 40. The Proponent **must** not erect or display any advertising structure(s) or signs on the site without the written approval of the Secretary.

Note: This does not include business identification, traffic management and safety or environmental signs.

WASTE MANAGEMENT

- 41. The Proponent **must** minimise the amount of waste generated by the project to the satisfaction of the Secretary.

EMERGENCY AND HAZARDS MANAGEMENT

Dangerous Goods

- 42. The Proponent **must** ensure that the storage, handling, and transport of dangerous goods are conducted in accordance with the relevant *Australian Standards*, particularly AS1940 and AS1596, and the *Dangerous Goods Code*.

Safety

43. The Proponent **must** secure the project to ensure public safety to the satisfaction of the **Secretary**.

Bushfire Management

44. The Proponent **must**:
- (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.

PRODUCTION DATA

45. The Proponent **must**:
- (a) provide annual production **data** to the **DRG** using the standard form for that purpose; and
 - (b) include a copy of this data in the **Annual Review**.

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

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 **must** notify the **Secretary**, 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.

INDEPENDENT REVIEW

2. If a landowner considers that the project is exceeding the impact assessment criteria in schedule 3, then he/she may ask the **Secretary** in writing for an independent review of the impacts of the project on his/her land.

If the **Secretary** is satisfied that an independent review is warranted, the Proponent **must** within 3 months of the **Secretary** advising that an independent review is warranted:

- (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 **Secretary**, 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 **Secretary** and landowner a copy of the independent review.
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 **Secretary**.
 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 **must**:
 - (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 **Secretary**.

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 **Secretary**.

5. If the landowner disputes the results of the independent review, either the Proponent or the landowner may refer the matter to the **Secretary** for resolution.

SCHEDULE 5
ENVIRONMENTAL MANAGEMENT AND MONITORING CONDITIONS

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. The Proponent **must** prepare an Environmental Management Strategy for the project to the satisfaction of the **Secretary**. This strategy must:
 - (a) be submitted to the **Secretary** 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:
 - 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;
 - (g) describe the role, responsibility, authority, and accountability of the key personnel involved in the environmental management of the project; **and**
 - (h) **include:**
 - reference to any strategies, plans and programs approved under the conditions of this approval; **and**
 - a clear plan depicting all the monitoring to be carried out under the conditions of this approval.

The Proponent must implement the strategy as approved by the Secretary.

Management Plan Requirements

- 1A. The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
 - (a) a summary relevant background or baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria; and
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;
 - (c) a description of the measures that to be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:
 - impacts and environmental performance of the project; and
 - effectiveness of any management measures (see (c) above);
 - (e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
 - (f) a program to investigate and implement ways to improve the environmental performance of the project over time;
 - (g) a protocol for managing and reporting any:
 - incidents;
 - complaints;
 - non-compliances with statutory requirements; and
 - exceedances of the impact assessment criteria and/or performance criteria; and
 - (h) a protocol for periodic review of the plan.

Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

Revision of Strategies, Plans & Programs

- 1B. Within 3 months of the submission of:
- an incident report under condition 4 below;
 - an Annual Review under condition 5 below;
 - an audit report under condition 6 below; and
 - any modifications to this approval,

the Proponent must review the strategies, plans and programs required under this approval, to the satisfaction of the Secretary. The Proponent must notify the Department in writing of any such review being undertaken. Where this review leads to revisions in any such document, then within 6 weeks of the review the revised document must be submitted for the approval of the Secretary.

Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the project.

ENVIRONMENTAL MONITORING PROGRAM

2. The Proponent **must** prepare an Environmental Monitoring Program for the project to the satisfaction of the Secretary. This program must be submitted to the Secretary prior to starting quarrying operations on the site, and consolidate the various monitoring requirements in schedule 3 of this approval into a single document.

INCIDENT REPORTING

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 **must** notify the Department and other relevant agencies of the exceedance/incident.
4. Within 6 days of notifying the Department and other relevant agencies of an exceedance/incident, the Proponent **must** provide the Department and these agencies with a written report that:
- describes the date, time, and nature of the exceedance/incident;
 - identifies the cause (or likely cause) of the exceedance/incident;
 - describes what action has been taken to date; and
 - describes the proposed measures to address the exceedance/incident.

REGULAR REPORTING

- 4A. The Proponent must provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.

ANNUAL REVIEW

5. Within 12 months of the date of this approval, and annually thereafter, the Proponent **must** submit an Annual Review to the Secretary and relevant agencies. This report must:
- identify the standards and performance measures that apply to the project;
 - describe the works carried out in the last 12 months;
 - describe the works that will be carried out in the next 12 months;
 - include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;
 - include a summary of the monitoring results for the project during the past year;
 - include an analysis of these monitoring results against the relevant:
 - impact assessment criteria/limits;
 - monitoring results from previous years; and
 - predictions in the documents listed in condition 2 of Schedule 2;
 - identify any trends in the monitoring results over the life of the project;
 - identify any non-compliance during the previous year; and
 - describe what actions were, or are being, taken to ensure compliance.

INDEPENDENT ENVIRONMENTAL AUDIT

6. Within 2 years of the start of quarrying operations on site, and every 5 years thereafter, unless the Secretary directs otherwise, the Proponent must commission, commence and pay the full cost of an Independent Environmental Audit of the project. This audit must:
 - (a) be conducted by a suitably qualified, experienced, and independent person(s) whose appointment has been approved by the Secretary;
 - (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;
 - (f) recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval; and
 - (g) be conducted and reported to the satisfaction of the Secretary.
7. Within three months of commencing an Independent Environmental Audit, or within another timeframe agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary, and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Secretary.

Monitoring and Environmental Audits

8. Any condition of this approval that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance report and independent audit.

Note: For the purposes of this condition, as set out in the EP&A Act, "monitoring" is monitoring of the project to provide data on compliance with the approval or on the environmental impact of the project, and an "environmental audit" is a periodic or particular documented evaluation of the project to provide information on compliance with the approval or the environmental management or impact of the project.

COMMUNITY CONSULTATIVE COMMITTEE

9. Prior to starting quarrying operations on the site, the Proponent must establish a CCC for the project. This CCC must be established and operated in accordance with the Department's *Community Consultative Committee Guidelines: State Significant Projects (2016)*, and to the satisfaction of the Secretary.

Notes:

- The CCC is an advisory committee only.
- In accordance with the guidelines, the committee should comprise an independent chair and appropriate representation from the Proponent, Council and the local community.

ACCESS TO INFORMATION

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 Annual Review, the Proponent must:
 - (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 Secretary.
11. For the life of the project, the Proponent must:
 - (a) make the following information publicly available on its website:
 - the documents listed in condition 2(a) of Schedule 2;

- current statutory approvals for the development;
 - all approved strategies, plans and programs required under the conditions of this consent;
 - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - a complaints register, updated monthly;
 - the Annual Reviews of the project;
 - any independent environmental audit as described in condition 6 above, and the Proponent's response to the recommendations in any audit; and
- (b) any other matter required by the Secretary; and
- (c) keep this information up-to-date,
to the satisfaction of the Secretary.

**APPENDIX 1
PROJECT SITE**



**APPENDIX 2
REHABILITATION STAGING PLAN**



APPENDIX 3 STATEMENT OF COMMITMENTS

Amended Statement of Commitments

The following sections summaries the commitments by Ramtech Pty Ltd regarding mitigations and control measures to be implemented for the proposal:

Sand Extraction

- Additional resource assessment works are to be undertaken in respect of two (2) key elements, being the extent of resource available for brickies loam and the extent of resource available with respect of mineral sands. Such assessments are to be undertaken in accord with the matters raised by the Department of Primary Industries in correspondence dated 21st December 2007.
- Annual production data will be made available in accord with DPI requirements.
- Extraction of marine clay will not be undertaken
- Sand extraction below the watertable will be by suction dredge only. No dry extraction of sand will occur on site, with the exception of the initial overburden and brickies loam.
- Prior to commencement of extraction, the extent of the approved extraction areas shall be clearly and permanently marked by a licensed surveyor with survey posts.
- Fines will be re-interred approximately below the watertable at approximately 10m below NSL.

Sediment and Erosion Control

- A perimeter bund and catch drain shall be constructed around each dredge pond and processing areas. The bund is to be vegetated.
- Installation of sediment control fences at the downslope perimeter of cleared or disturbed land. These are to be functional before clearing commences.
- A negative grade will be maintained around the dredge ponds within the bunded perimeter.
- Additional Erosion and sediment control devices shall be installed on an 'as required' basis. Such measures will be installed in accordance with the "Soils and Construction Guidelines – Managing Urban Stormwater".
- Where practical, surface waters from undisturbed areas shall be diverted away from extraction/works areas.
- All processing areas will drain towards the onsite water bodies. No discharge of processing waters from the site shall occur under normal conditions (ie. Not flooded).
- Topsoil stripping will be undertaken in sub-stages of 1 hectare or less
- All existing ground cover around the site is to remain and be maintained to limit sediment and erosion.
- Any on-site stockpiles of commercial sand shall remain damp and will have appropriate sediment and erosion control devices installed at all times.
- Stockpiled topsoil shall be seeded so as to achieve adequate vegetation cover and sediment and erosion devices will be installed around all stockpiles at all times.
- No discharge of processing water from the site shall occur under normal conditions (ie. not flooded)

Surface Water Control & Quality

- Installation of surface and ground water monitoring devices as located on figure GJ0400.9.2 (Appendix Q)
- Surface water monitoring shall be undertaken in accordance with requirements as outlined with the draft EMP under Appendix G.

- All processing areas will drain towards the onsite water bodies. No discharge of processing waters from the site shall occur under normal conditions (ie. not flooded).
- Provision of reliable *in situ* monitoring equipment at all times for use by Quarry staff. This equipment will be calibrated at least monthly.
- All effluent generated will be pumped off site for treatment at Council facility.

Groundwater Movement and Quality

- Installation of ground water monitoring devices as located on figure GJ0400.8.1 (Appendix Q)
- Ground water monitoring shall be undertaken in accordance with the requirements as outlined within the draft EMP under Appendix G.
- Provision of reliable *in situ* monitoring equipment at all times for use by Quarry staff. This equipment will be calibrated at least monthly.
- All groundwater bores will be licensed by DIPNR.
- Dewatering from on site water bodies will not be undertaken
- Contour profiling of groundwater head data will be undertaken as part of site monitoring and reporting procedures.

Fuel Management and Land Contamination

- Fuel storage is to be contained within a bund area, and protected from the elements. Bunding will be sufficient to contain 110% of the volume of fuel storage.
- Operating procedures for containing and cleaning up oil spills on water to be established and implemented on site, with all staff to be trained in these procedures. Such measures are to form part of the site EMP.
- Products designed to contain and absorb oil spills on water will be available on site. Quantity and type of product will be monitored and will be available in sufficient quantities to deal with any potential spill on site.
- Materials stored on site will be limited to
 - One (1) month supply of diesel
 - Machine and equipment oils and grease
 - limited quantities of petrol

Air Quality

- The full length of internal haulage roadways will be sealed.
- A vegetation barrier for dust control along the southern boundary adjoining Warwick Park Road will be established (species and planting in accordance with rehabilitation plan, Appendix H).
- Topsoil stripping will be undertaken in sub-stages of 1 hectare or less.
- Topsoil stripping will not be undertaken on day with excess winds.
- All trucks entering/leaving the site shall be covered.
- Stockpiled topsoil shall be seeded so as to achieve adequate vegetation cover and sediment and erosion devices will be installed around all stockpiles.
- Any disturbed or unsealed movement areas will be watered by an onsite cart to ensure that such areas remain damp. Watering rates shall not be less than 2.5l/m²/hour.

Noise

- Construction of a 4m high earth mound shielding the operational areas. This mound shall form part of the stockpile and be lightly top soiled, seeded and maintained with native grasses.

- The earth mound is to be constructed between 7.30am and 5pm. The occupants of the nearest dwellings to the site be notified as to the hours of operation for the mound construction, and be provided with a contact telephone number should they have concerns regarding noise from this stage of the operation;
- The bulldozer used to construct the earth barriers should be well maintained, and fitted with residential mufflers;
- Upon plant dredge pump selection, noise levels should be less than or equal to 88dB(A) at 1m from the plant. If this level is not achievable, further acoustic treatment in the form of a semi enclosure will be required to reduce source noise levels to within the acceptable range;
- Upon sand screening plant selection, noise levels should be less than or equal to 80dB(A) at 1m from the plant. If this level is not achievable, further acoustic treatment in the form of a semi enclosure will be required to reduce source noise levels to within the acceptable range;
- Haulage trucks and the wheeled loader should be well maintained, and fitted with residential mufflers;
- Internal haulage route and the crossover to Pottsville Road be as smooth as possible, and well maintained;
- Prior to commencement of operations, an acoustic test be conducted to ensure compliance with the noise limit criteria;
- All operations to be limited to 7am to 6pm, Monday to Friday, and 7am to midday, Saturdays.

Flora & Fauna

- A detailed regeneration and rehabilitation plan is to be prepared and approved by the DECC prior to the issue of a construction certificate.
- Removal of existing weed species (particularly infestations of Bitou Bush and Lantana).
- Revegetation of disturbed areas within existing native vegetation communities with plants endemic to the locality. Revegetation areas will total approximately 15ha in area. No clearing of vegetation is required with the exception of approximately 20 Casuarina trees lining minor drainage channels in the extraction areas.
- Revegetation of nominated areas within the rehabilitation plan as attached under Appendix H to strengthen potential habitat corridors, extend the distribution of Swamp Sclerophyll and Littoral Rainforest environments and to extend the perimeter of the narrowest portions of the eastern forest to provide long-term mitigation against potential edge effects.
- A monitoring program will be implemented in respect of the rehabilitation areas external to the extraction areas. Such program will be subject to final approval by the DECC and will contain consideration of additional rehabilitation / regeneration areas at the expense of implementation of the nest boxes. Consideration will also be given to strengthening corridor linkages where possible.
- Incorporation of potential foraging resources for threatened fauna species within landscaping/revegetation areas including:
 - *Allocasuarina littoralis*, *A. torulosa* for Glossy Black Cockatoos
 - Flowering species (Eucalypts, Corymbians, Melaleuca, Banksia) for flying fox/bat species
 - Littoral Rainforest fruiting species for Fruit-doves/Rainforest Pigeons
 - Favoured Eucalypts for Koalas
- Installation of nest boxes within the existing vegetation communities.

Waste

- All soil waste will be disposed of by licensed contractor in accordance with the *Protection of Environmental Operations Act 1997* (POEO Act 1997) & *Waste Minimisation Act 1995*.
- All solid wastes are to be managed in accord with the attached HMC Solid Waste Management Plan.
- Effluent will be treated on site in accord with the attached HMC report.

Flooding

- Adoption of a maximum 300mm bund height to all levels below 2m AHD.

Cultural Heritage

- The proponent will undertake additional archaeological surveys of the proposed extraction areas prior to works commencing to provide assurance that no aboriginal sites exist within the extraction areas
- If aboriginal sites are found within the extraction areas the proponent must undertake surveys / assessment to determine the cultural heritage values of the site and report how those values might be impacted upon and provide appropriate avoidance, mitigation or compensatory measures. Such additional assessments must be in accord with guidelines and requirements of the DECC.

Views and Landscapes

- 5m to 10m vegetated buffers will be established around the extraction areas in accordance with the rehabilitation plan attached under Appendix H. The objectives of these areas are for visual protection primarily.
- A detailed rehabilitation plan will be prepared for those areas external to the extraction areas.

Monitoring, Reporting and Consultation

- Reporting and consultation measures will be implemented as outlined with the draft EMP under Appendix G.

Licensing

- The proponent will commit to gaining an Environmental Protection Licence from DECC.

APPENDIX 4
Deleted