Appendix 3

2013 Independent Environmental Audit

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Teralba Quarry
Independent Environmental Audit

February 2014

This Independent Environmental Audit was conducted to satisfy the requirement of Project Approval Schedule 5 condition 9 granted to the Metromix Pty Ltd by the Minister for Planning on 22 February 2013.

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METROMIX

Teralba Quarry

Independent Environmental Audit

February 2014

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Principal Environmental Management Consultant
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GLOSSARY

Annual Return	Annual Return required under the EPL No. 20190
Annual Review	Review required under Project Approval Schedule 5 condition 4
BCA	Building Code of Australia
CCC	Community Consultative Committee
Department	Department of Planning and Infrastructure (as defined in the Project Approval definitions)
Director-General	Director-General of the Department of Planning and Infrastructure, or delegate
DoP	Department of Planning (now Department of Planning and Infrastructure)
DP&I	Department of Planning and Infrastructure
DPI	Department of Primary Industries within the Department of Trade and Investment, Regional Services and Infrastructure
DRE	Division of Resources and Energy within the Department of Trade and Investment, Regional Services and Infrastructure
EA	*Environmental Assessment: Teralba Quarry Extensions*, November 2011
EPA	NSW Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPL	Environment Protection Licence No. 0536 under POEO Act
km	Kilometres
LGA	Local Government Area
m AHD	Metres Australian Height Datum
mgbl	metres below ground level (groundwater)
Minister	Minister for Planning and Infrastructure, or delegate
Mitigation	Activities associated with reducing the impacts of the project
NOW	New South Wales Office of Water (within Department of Primary Industries)
OEH	Office of Environment and Heritage (within Department of Premier and Cabinet
POEO Act	*Protection of the Environment Operations Act* 1997
Project Approval	Project Approval 10_0183 Teralba Quarry Extensions
Proponent	Metromix Pty Ltd
RMS	Roads and Maritime Services
RTA	Roads and Traffic Authority (now RMS)
SoC	Statement of Commitments in Environmental Assessment, section 6, November 2011
TSS	Total Suspended Solids

EXECUTIVE SUMMARY

An independent environmental audit of the Teralba Quarry was conducted in February 2014 by Trevor Brown of Trevor Brown & Associates, to assess the compliance status of the Teralba Quarry Extensions development and operations, in accordance with Project Approval Schedule 5 condition 9.

The audit was conducted generally in accordance with the Australian/New Zealand Standards AS/NZS ISO 19011:2002 - Guidelines for Quality and/or Environmental Management System Auditing.

The documentation and files held by the Teralba Quarry and interview/discussion with relevant site personnel provided the auditor with the required information and documentation for the verification of compliance of the Teralba Quarry Extensions operations with the Project Approval and other statutory environmental approvals.

Environmental Management

The Environmental Management Strategy addresses the majority of the elements of ISO14001 and provides a sound basis for the management of the Teralba Quarry activities and operations, when implemented with the approved Environmental Management Plans.

Noise Management

The Noise Management Plan is adequate for the Teralba Quarry site operations. The noise monitoring program identified in the Noise Management Plan should be conducted prior to June 2014 (i.e. within 6 months of commencement of works in the Southern Extension Area) to confirm that the noise emissions from the quarry operations are compliant with the predicted noise assessment criteria and the Project Approval and EPL conditions.

Blast Management

Blast management at the Teralba Quarry occurs in accordance with the Project Approval and EPL conditions and AS 2187.2 Explosive Storage, Transport and Use. The Blast Management Plan is adequate for the Teralba Quarry operations. The blast monitoring results during 2013 indicated that no exceedence of the blast overpressure or vibration criteria occurred as a result of the blasts conducted at the Teralba Quarry.

Air Quality

The Air Quality Management Plan and dust control measures appear to be adequate for the Teralba Quarry operations and activities. Dust management issues generally arise when there are high wind events from the western quadrant which has the potential to result in dispersion of dust to the residential areas of Teralba village. Only two (2) complaints were received during 2013 related to dust (27 November dust on site from the crushing and screening plant; and 5 December 2013 dust leaving the site). The December complaint to the EPA was related to dust from the crushing plant and the plant was shut down when the wind strength caused dust dispersion from the site

Water Management

. The Water Management Plan including the Site Water Balance had not been approved by DP&I at the date of this audit. Metromix had not resubmitted the revised Water Management Plan to DP&I addressing the comments received on 16 January 2014 at the date of this audit. The water management and monitoring on the Teralba Quarry are being conducted in accordance with the draft Water Management Plan and draft EPA licence and water management on the site was observed to be compliant with the requirements of the EPL and Project Approval conditions during the site inspection.

Erosion and Sediment Control

The erosion and sediment control measures constructed on the Teralba Quarry site have adequate capacity to retain and settle sediment containing runoff from the disturbed areas of the site. The calculations for the sediment dam capacities are conservative and the sediment dams inspected during the site visit had their design capacity available for collection and settlement of surface

runoff. Recent rainfall events (15-16 February and 2-3 March 2014) had been managed within the sediment dams and the capacity of the dams were still capable of receiving further runoff in the event of heavy rainfall. No discharge occurred from the sediment dams following the recent rains.

Groundwater

Metromix has a current NOW Bore Licence No. 20BL173206 license issued on 12 October 2012, to extract groundwater for Dewatering and Industrial –Sand and Gravel use that allows for a maximum extraction of 1407 ML per year.

The revision of the Water Management Plan to address the comments from DP&I on groundwater assessment criteria, including trigger levels, a program to monitor surface water inflows into the groundwater system beneath the site and a program to monitor the impacts of the project on the local aquifer, received on 16 January 2014, had still to be addressed and resubmitted to DP&I on the date of this audit.

Water Quality Monitoring

Water quality monitoring has demonstrated compliance with the EPL criteria for the Mine Adit monitoring EPA approved monitoring point 4. The discharge water quality from Dam B, EPA approved monitoring point 5, was generally compliant with the EPL criteria. Intense rainfall events on 18 and 19 November 2013 resulted in overflow of Dam D resulting in high TSS levels being discharged downstream from Dam B.

It is recommended that nomenclature used for the water monitoring locations should be consistent with the EPA approved monitoring points identified in Notice of Variation to the Environment Protection Licences condition P1.3.

Waste Management

Waste management on the site occurs in accordance with the Waste Management Plan. The management of the waste materials is considered to be satisfactory and the volumes of waste generated on the site from the Teralba Quarry activities is minimised where practicable with reuse / recycling occurring where possible to reduce waste going to landfill.

Heritage Management

An Aboriginal Heritage Management Plan was prepared in June 2013 to satisfy the requirements of this condition. The draft Aboriginal Heritage Management Plan was submitted to DP&I in August 2013 (i.e. within 6 months of the date of this Project Approval). Comments were received from DP&I on the draft Aboriginal Heritage Management Plan on 16 January 2014. The revised Aboriginal Heritage Management Plan should be prepared and resubmitted to the DP& for approval.

Conclusion

The independent environmental audit findings confirm the Teralba Quarry Extension is being developed generally in accordance with the project description outlined in the Environmental Assessment for the Teralba Quarry Extensions November 2011.

The operation of the Teralba Quarry development is generally in accordance with the predictions in the Environmental Assessments and demonstrates compliance with the Project Approval conditions, Statements of Commitment and the Environment Protection Licence conditions.

1. INTRODUCTION

1.1 Background

The Project Approval 10_0183 granted for the Teralba Quarry Extensions requires an Independent Environmental Audit of the project in accordance with the Project Approval Schedule 5 conditions 9:

> *"The independent environmental audit referred to in condition 5.1c) shall:*
> *(a) be conducted by a suitable qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;*
> *(b) include consultation with the relevant agencies;*
> *(c) assess the environmental performance of the project and assess whether it is complying with the requirements of this approval, and*
> *any other relevant approvals and relevant EPL/s;*
> *(d) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and*
> *(e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy, plan or program required under these approvals.*

This current Independent Environmental Audit was commissioned by Metromix for the Teralba Quarry and conducted by Trevor Brown of Trevor Brown & Associates, endorsed by the Director-General of Department of Planning and Infrastructure (DP&I) to satisfy Project Approval Schedule 5 conditions 9.

The audit was conducted generally in accordance with the Australian/New Zealand Standards AS/NZS ISO 19011:2002 - Guidelines for Quality and/or Environmental Management System Auditing.

1.2 Scope of Work

The scope of work for the audit of the Teralba Quarry Extensions included the following components:

- review of implementation of the requirements of the Project Approval conditions, and other licences and approvals for the project for the construction and operation of the quarry;
- conduct of a site inspection and review on-site documentation and monitoring data relevant to the audit;
- discussions with Metromix project staff in relation to the Project Approval conditions;
- assessment of compliance with the Project Approval conditions; and
- preparation of an Independent Environmental Audit Report providing assessment of compliance against each Project Approval conditions.

1.3 Structure of the Independent Environmental Audit Report

The report has been prepared to provide comment on each condition of approval in a tabulated form, with additional discussion where required on specific matters. The tabulated comments are attached for the Project Approval, Environmental Protection Licence (EPL) and other relevant environmental approvals, with discussion of the status of other approvals provided where relevant:

Executive Summary	
Section 1	Introduction
Section 2	Project Status February 2014
Section 3	Approvals and Licenses
Section 4	Review of Environmental Management
Section 5	Conclusions
Attachment 1	Project Approval 10_0183 - Consolidated Conditions
Attachment 2	Statements of Commitment
Attachment 3	Environment Protection License No. 0536
Appendix A	Letters of Consultation with Agencies

1.4 Compliance Tables

The following terminology is used to express the status of compliance of the NCIG Kooragang Island Export Coal Loader activities with the Project Approval conditions, and Environment Protection Licence conditions expressed in Attachments:

Compliant	Implies compliance with the intent and/or requirement of the approval condition.
Compliant Ongoing	Implies compliance with the intent and/or requirement of the approval condition at the time of the audit, and the activity has an ongoing requirement to comply.
In progress	Requirements of the condition were being developed at the date of this audit (i.e. February 2014) to meet the Project Approval.
Not compliant	The specific requirement of the Project Approval condition was not met in the specified time frame but was subsequently complied with and addressed the condition requirements.
Non-Compliant	The specific requirement of the Project Approval condition was not met.
Not Yet Activated	The condition had not been activated or the activity had not yet commenced.
Not Applicable	The requirement of the condition had not been triggered (e.g. complaint driven monitoring, land acquisition, etc.) by the current activities
Noted	No specific auditable requirement for the condition.

2.0 PROJECT STATUS – January 2014

The Project Approval 10_0183 granted on 22 February 2013, provided approval of the activities described in the *Environmental Assessment for the Teralba Quarry Extensions,* November 2011. The Project Approval was for the full range of activities undertaken prior to 22 February 2013 and the extension of extraction operations to the north and south of the previously approved extraction areas.

The location of the approved activities on site are shown in Figure 2.0. The activities include:

- Conglomerate extraction (blasting and excavation) in:.
  – Southern Extraction Area.
  – Mid Pit Extraction Area.
  – Southern Extension.
  – Northern Extension.
- Processing Operations (size reduction, screening and blending):
  – Existing processing plant.
  – In-pit crushing (in the Southern and Northern Extensions).
- On-site Load and Haul Operations:
  – Off-road trucks used on the quarry road network.
  – Conveying primary-crushed rock from the Southern and Northern Extensions to the processing plant (including conveyor beneath Rhondda Road).
- Off-site road transportation of products.
- Vehicle/equipment maintenance and ancillary activities and stores on-site.
- Administration and product despatch.
- Progressive rehabilitation and maintenance of the disturbed areas of the quarry site.

The proposed sequence plan for extraction of resource from the Teralba Quarry is currently as follows:

- Year 1 (2013) – Suspend extraction in Mid Pit Extraction Area;
- Years 2 to 9 (2014 to 2021) – Southern Extension (Western Area to 20mAHD) Stage 1A (see Figure 1);
- Years 10 to 22 (2022 to 2035) – Complete extraction in Mid Pit Extraction Area and commence Northern Extension.

Development works for the Teralba Quarry Extensions have commenced generally in accordance with the *Environmental Assessment: Teralba Quarry Extensions* November 2011, and the Project Approval granted on 22 February 2013.

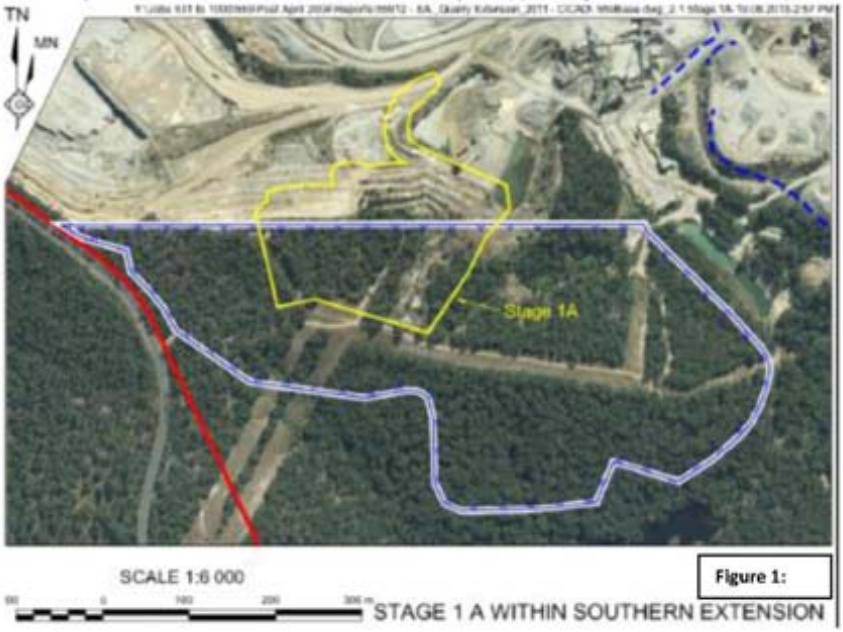
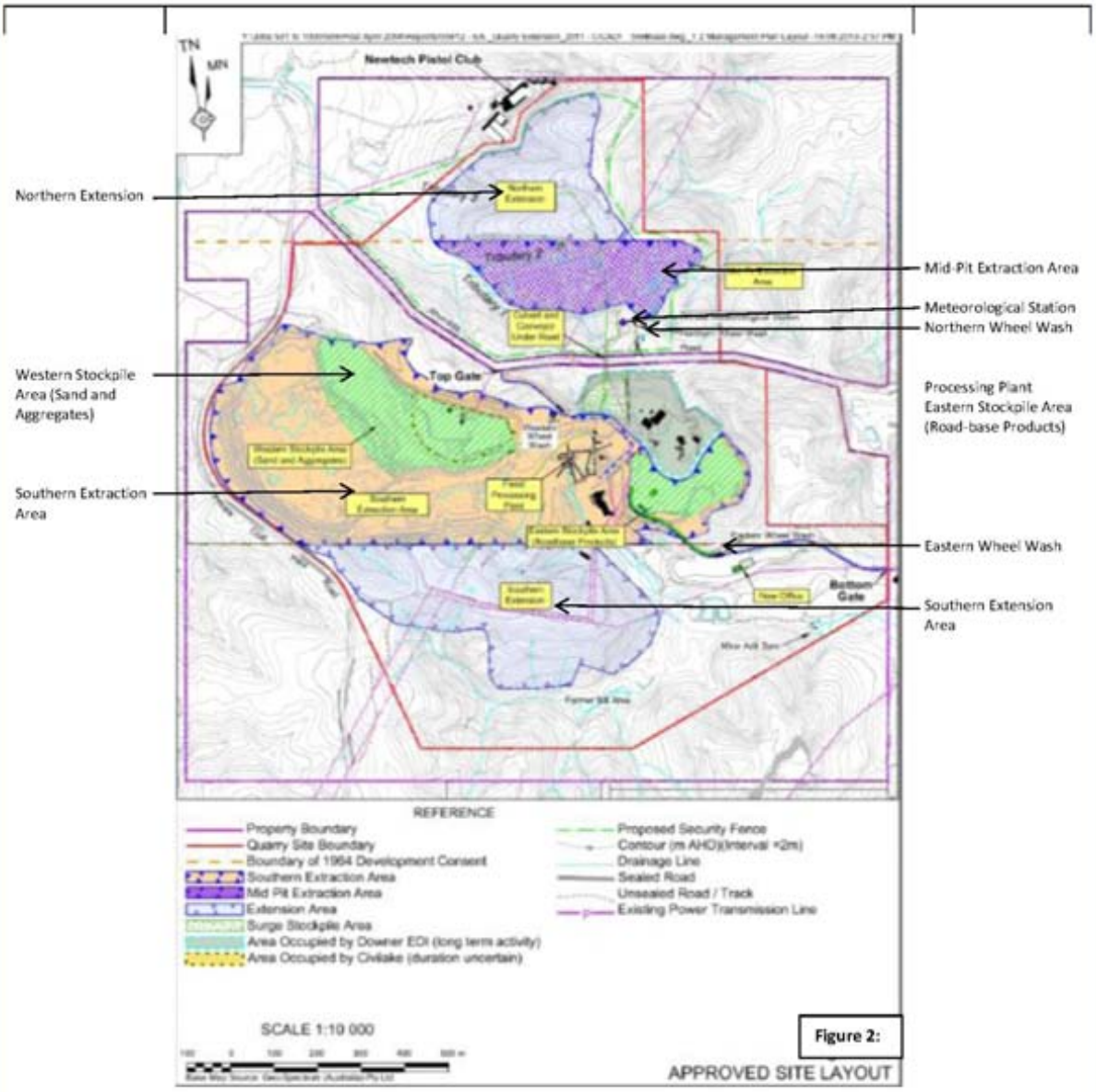


Figure 1: STAGE 1 A WITHIN SOUTHERN EXTENSION

Figure 2: Teralba Quarry – location of approved activities



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3.0 PROJECT APPROVALS AND LICENSES

The current project environmental approvals for the Teralba Quarry operations are:

3.1 Project Approval – 10_0183

The proposal for the Teralba Quarry was declared a Major Project under section 75B(1)(a) of the *Environmental Planning and Assessment Act* 1979, as a development described in clause 22 of Schedule 1 to State Environmental Planning Policy (Major Projects) 2005.

3.2 Environment Protection Licence

Metromix obtained Environment Protection Licence (EPL) No. 0536 under section 55 of the *Protection of the Environment Operations Act* 1997, on 25 September 2000. The EPL is subject to review each 5 years as set out in *Protection of the Environment Operations Act* 1997 Schedule 5 Part 3.6. The EPL is current until it is surrendered or revoked.

EPL 0536 Scheduled Activities / Fee Based Activities are:

- Crushing, Grinding & Separating >500,000 to 2,000,000 T processed
- Extractive Activities >500,000 to 2,000,000 T extracted, processed or stored

The following Notices of Variation to EPL 0536 have occurred. A draft Variation Notice to EPL 0536 and Request for an Updated Site Plan was provided Metromix by the EPA on 7 February 2014.

Date	Notice of Variation No.	Variation made to the EPL
07 Feb 2014	1512791	• Condition A1 - Addition of scheduled activity. • Condition A2 - An updated location description of the premises boundary. SITE PLAN FROM A EGISTERED SURVEYOR TO BE PROVIDED BY LICENSEE. • Condition P1 - Addition of air and water discharge and monitoring point locations. • Condition L2 - Addition of concentration limits for discharges at Points 4 and 5. • Condition L3 - Addition of volume limit at Point 4. • Condition L4 - Addition of waste limits. • Condition L5 - Addition of noise limits. • Condition L6 - Addition of blast limits. • Condition L7 - Addition of potentially offensive odour limits. • Condition M2 - Addition of requirement to monitor concentration of pollutants discharged. • Condition M3 - Addition of testing methods (concentration limits). • Condition M4 - Addition of requirement to monitor noise. • Condition M5 - Addition of requirement to monitor weather parameters. • Condition M8 - Addition of requirement to monitor volume or mass. • Condition M9 - Addition of requirement to monitor blasts. • Condition R4 - Addition of requirement to prepare a noise monitoring report. • Pollution Studies and Reduction Programs - Addition of assessment of metals leaving the premises
30 Dec 2011	1502938	Conversion of the licence using the new software.
08 Jul 2009	1102082	A2.2 The licence does not apply to the area of land detailed in the survey map titled "Plan showing environment protection licence within Lot 1 DP234037 of Rhondda Road, Teralba" dated 19 January 2009 and filed in LIC09/705. This area of land is subject to a different licence.

The additional information requested in the Notice of Variation No. 1512791 and any comments for the revised draft variation notice were requested to made in writing to the EPA Regional Manager — Hunter by 20 February 2014. Should no comment on the revised draft variation notice be received by this date, the notice may be issued as final without change.

Although the EPL Variation of 7 February 2014 had not been finalised at the date of this audit, the Teralba Quarry operation and activities were being conducted generally in conformance with the EPL draft conditional requirements.

3.3 Water Licence

A Bore Licence No. 20BL173206 was issued on 12 October 2012 to Metromix under the *Water Act 1912* section 115 for the purpose of dewatering (groundwater) Industrial – Sand and Gravel on Lot 2 DP 224037 Parish of Teralba, County Northumberland. The volume of groundwater extracted from the works authorised by the Bore Licence shall not exceed 1407ML in any 12 month period commencing 1 July to 30 June.

4.0 REVIEW OF ENVIRONMENTAL MANAGEMENT

A summary of the status of the environmental management conditions for the Teralba Quarry required under the Project Approval 10_0183 and EPL 0536 and implementation of the requirements of the conditions are presented below. (Summary Tables of compliance are provided in Attachments to this report).

4.1 Environmental Management Strategy

[Project Approval Schedule 5 condition 1]

The Environmental Management Strategy was prepared to satisfy Project Approval Schedule 5 condition 1 and submitted to DP&I in August 2013. The Environmental Management Strategy was approved on 16 January 2014.

The Environmental Management Strategy is an over-arching document to the other management plans prepared to guide operations within the Teralba Quarry, including:

- Noise Management Plan (approved by DP&I on 16 January 2014).
- Blast Management Plan (approved by DP&I on 10 October 2013)
- Air Quality Monitoring Program (approved by DP&I on 10 October 2013)
- Transport Management Plan (approved by DP&I on 10 October 2013)
- Waste Management Plan (approved by DP&I on 10 October 2013)
- Water Management Plan (including Site Water Balance, Surface Water Management Plan and Groundwater Management Plan)
- Aboriginal Cultural Heritage Management Plan.
- Landscape Management Plan (due for submission to DP&I in February 2014)
- Lower Level Extraction Management Plan (incorporating a Spontaneous Combustion Management Plan) (due for submission to DP&I in February 2014)

4.1.1 Conclusion

The Environmental Management Strategy addresses the majority of the elements of ISO14001 and provides a sound basis for the management of the Teralba Quarry activities and operations when combined with the implementation of the approved Environmental Management Plans.

4.2 Noise Management

[Project Approval Schedule 3 conditions 5 to 8]

4.2.1 Noise Management Plan

[Project Approval Schedule 3 condition 8]

The Noise Management Plan was prepared to satisfy Project Approval Schedule 3 condition 8 and submitted to DP&I in August 2013. The Noise Management Plan was approved by DP&I on 16 January 2014.

4.2.2 Predicted Noise Impacts and Noise Criteria

[Project Approval Schedule 3 conditions 5]
[EPL condition L4.1 to L4.8]

The Environmental Assessment Specialist Consultant Studies Compendium Volume 1 Part 6 Noise and Vibration Assessment concludes that impacts of noise from the Teralba Quarry, on the surrounding community, is predicted to be negligible and if assuming cumulative noise levels from surrounding noise sources are at the limit of the amenity criterion, when combined with the worst case predicted noise emissions from Teralba Quarry, there would be less than 1dB(A) increase in the total noise received by the nearest sensitive receivers. The specialist study also concluded *"The results of the noise modelling and*

assessment have shown that there will be no adverse impacts as a result of the night time loading of trucks, trucks transporting quarry products and noise and vibration associated with blasting. There may be some minor impacts at some residences in Railway Street as a result of noise from trucks using the eastern entrance to the quarry. ..... The "Maximum Cumulative Noise Increase" calculation of the addition of the worst case predicted noise level from Teralba Quarry with the maximum allowable level of the amenity criterion for that locality."

The worst predicted noise levels for the nearest receivers ranged from 19.6 to 45.6 $LA_{eq(15\ minutes)}$ for daytime (amenity Criteria is 55 $LA_{eq(15\ minutes)}$) and 28.5 to 35.6 $LA_{eq(15\ minutes)}$ for evening (amenity 45 $LA_{eq(15\ minutes)}$).

The noise assessment criteria specified in the Project Approval Schedule 3 condition 5 and draft EPL condition L5.1, are:

Location	Day Shoulder 6am - 7am	Day 7am - 6pm	Evening 6pm - 10pm	Night 10pm - 6pm
	LA eq(15min)	LA eq(15min)	LA eq(15min)	LA eq(15min) LA eq(1min)
EPL-A 22 Awaba St Teralba	38	38	37	35 45
EPL-B 153 Railway St Teralba	42	46	36	35 45
EPL-C 8 Rhondda Rd Teralba	42	42	35	35 45
EPL-D 26 Rhondda Rd Teralba	35	35	35	35 45
EPL-E 57 Victoria Ave Teralba	35	35	35	35 45
EPL-F 63 Victoria Ave Teralba	35	35	35	35 45
EPL-H 52 School Rd Teralba	37	38	38	35 45

4.2.3 Noise Monitoring

[Project Approval Schedule 3 conditions 8(d)]

Independent noise monitoring is to be undertaken at 6 monthly intervals during the first 2 years of operations of the Southern Extension (quarry activities on the Southern Extension commenced in December 2013). After assessment of the initial noise monitoring the frequency of monitoring may revert to annual monitoring to be conducted during a period when the predominant wind is blowing from the western quadrant towards residences in Teralba village.

An independent noise consultant will be commissioned to undertake the noise monitoring and provide an annual report (for inclusion in the Annual Review – due in March 2014) that evaluates and reports upon the effectiveness of the noise management system on site throughout the annual reporting period.

The Quarry Manager or Quarry Supervisor will review the monitoring results assembled after each monitoring event assessing:

i. the meteorological data for the corresponding period;
ii. the locations and duration of activities on site during the corresponding period; and
iii. data on activities at the nearby asphalt plant (operated by Downer within the Teralba Quarry lease area.

In the event that i and ii suggest the quarry is the source of the elevated noise levels, the Quarry Manager will initiate its corrective and preventative action plan.

Noise monitoring results were not available at the date of this audit, as the Southern extension quarrying activities had only commenced in December 2013.

4.2.4 Conclusions

The Noise Management Plan appears to be adequate for the Teralba Quarry site operations. The noise monitoring program identified in the Noise Management Plan should be conducted prior to June 2014 (i.e. within 6 months of commencement of works in the Southern Extension Area) to confirm that the noise emissions from the quarry operations are compliant with the predicted noise assessment criteria and the Project Approval and EPL conditions.

4.3 Blast Management

[Project Approval Schedule 3 conditions 9 to 16]

4.3.1 Blast Management Plan

[Project Approval Schedule 3 condition 16]

The Blast Management Plan was prepared to satisfy Project Approval Schedule 3 condition 16 and submitted to DP&I in August 2013. The Blast Management Plan was approved by DP&I on 10 October 2013.

4.3.2 Predicted Blast Impact

The Environmental Assessment Specialist Consultant Studies Compendium Volume 1 Part 6 concludes that impacts of blasting at the Teralba Quarry on the surrounding community, is predicted to be negligible. Potential impacts of blasting can be kept within the Project Approval, EPL and Mine Lease conditions and guidelines, provided the maximum instantaneous charge (MIC) is kept below 60kg when blasting at 700m from residences.

The closest point of blasting from the Southern Extension approved extraction area to the nearest residence in the next 10 years will be approximately 1.2km from the blast locations. Blasting north of Rhondda Road when the Northern Extension quarrying commences, would be at distances of approximately 900m from the nearest residences for the life of the project.

4.3.3 Blast Criteria and Monitoring

[Project Approval Schedule 3 condition 9]
[EPL condition L6]

The criteria for the overpressure and vibration impact from blasting are provided in Project Approval Schedule 3 condition 9 and EPL condition L6:

Location	Airblast Overpressure (dB(Lin Peak)	Ground Vibration (mm/s)	Allowable exceedence
Any residence on privately owned land, or any public infrastructure	120	10	0%
	115	5	5% of the total number of blasts over a 12 mth period

Thirty four (34) blasts were recorded for the Southern Pit, Mid-Pit southern bench and S2Area between January and December 2013. No exceedence of the blast overpressure (i.e. >115dBL) or vibration criteria (i.e. >5mm/s) were recorded.

One complaint was received by Division of Resources and Energy (DRE) on 15 January 2013. The monitoring results for the blast indicated blast overpressure of less than 100dBL and less than 08mm/s ppv. (This complaint was received prior to the Teralba Quarry Extensions Project Approval 22 February 2013).

4.3.4 Conclusions

The Blast Management Plan is adequate for the operations at the Teralba Quarry. Blast management at the Teralba Quarry occurs in accordance with the Project Approval and EPL conditions and AS 2187.2 Explosive Storage, Transport and Use. The blast monitoring results during 2013 indicated that no exceedence of the blast overpressure or vibration criteria occurred as a result of the blasts at the Teralba Quarry.

4.4 Air Quality Management

[Project Approval Schedule 3 conditions 17 to 21]
[Statement of Commitments 11.1 to 11.18]
[EPL conditions L6.1 and L6.2]

4.4.1 Air Quality Management Plan

[Project Approval Schedule 3 condition 20]

An Air Quality Management Plan was prepared to satisfy Project Approval Schedule 3 condition 20 and submitted to DP&I in September 2013. The Air Quality Management Plan was approved by DP&I on 10 October 2013.

4.4.2 Dust Management

The general measures undertaken by Metromix for the management and control of dust generation at the Teralba Quarry are:

- Dust generating activities in the high exposed areas are scheduled, as much as practicable, when winds are not from the western quadrant;
- During periods of high wind (typically from the western quadrant) activities that may generate dust are curtailed in the higher exposed areas;
- Additional water is applied to internal roads in use for hauling primary raw feed;
- Other open areas with potential to generate dust are watered using the water truck;
- Areas within the Teralba Quarry Site that are no longer operational for extraction activities are rehabilitated in accordance with the Landscape Management Plan.

4.4.3 Predicted Air Quality and Criteria

[Project Approval Schedule 3 condition 17]

The dispersion air modelling conducted for the Environmental Assessment (Specialist Consultant Studies Compendium Volume 1 Part 7) predicted that including conservative background concentrations, the annual average TSP and annual average PM_{10} concentrations would meet DECCW guidelines at all of the identified discrete receptors and at the boundaries of the Teralba Quarry Site.

The 24 hour average PM_{10} was predicted to exceed the DECCW guideline value of 50 µg/m³ at and just beyond the northern-most border of the Project Site but this area forms part of a neighbouring coal mining operation and will not be used for residential purposes. Annual average deposited dust was predicted to meet DECCW guidelines at all sensitive receiving environments.

Table 4.4.2: Predicted Cumulative Air Quality Impacts (EA Nov 2011)

Residential Receptor ID	PM_{10} Annual Average (µg/m³)		PM_{10} 24hr Average (µg/m³)		Deposited Dust (mg/m²/mth)	
	Incremental	Cumulative	Incremental	Cumulative	Incremental	Cumulative
A	0.4	16	0.6	40	0.2	2.1
B	0.9	16	1.4	41	0.4	2.2
C	0.2	16	1.8	42	0.0	2.0
D	0.9	16	1.2	41	0.3	2.1
E	0.7	16	0.8	40	0.2	2.1
F	0.4	16	0.5	40	0.1	2.0
G	0.1	16	0.0	39	0.0	2.0
H	0.1	16	0.0	39	0.0	2.0
I	0.1	16	0.0	39	0.0	2.0
DECCW Guideline	30 µg/m³		50 µg/m³		2 mg/m2/mth incremental or 4 mg/m2/mth cumulative	

4.4.4 Meteorological Monitoring

[Project Approval Schedule 3 condition 21]

An automated meteorological station has been installed on-site, located 70m north of Rhondda Road adjacent to the access road to the Northern Extension Area. The meteorological station has been sited on area that would satisfy the criteria for the location of a weather station as described in *AS 2922:1987 Ambient Air - Guide for the Siting of Sampling Units* (NSW DECCW Method AM-1), and the NSW DECCW *Approved methods for the sampling and analysis of air pollutants in NSW* (DECC, 2005).

The station complies within the requirements in **the** *"Approved Methods for Sampling of Air Pollutants in NSW" Table 1.* The meteorological station records:

- temperature;
- rainfall
- solar radiation;
- humidity;
- dew point;
- air pressure; and
- fire danger index.

4.4.5 Air Quality Monitoring

[Project Approval Schedule 3 condition 20(d)]

Dust monitoring equipment has been installed in accordance with *AS/NZS 3580.10.1:2003 Methods for Sampling and Analysis of Ambient Air, Determination of Particulates— Deposited Matter—Gravimetric method.* The five (5) dust deposition gauges are located to the east of the Teralba Quarry on the western outskirts of Teralba village, given the prevailing and dominate winds from the western quadrant and the location of the closest residential and sensitive receivers.

Table 4.4.5: Deposited Dust Monitoring Data February to December 2013

2013 Results	Rhondda Rd	Myrtle St	Hillside Cres	Rodgers St	Margaret St
February	1.2	0.7	0.7	1.4	2.6
March	0.5	0.8	1.3	1.2	0.9
April	0.6	0.5	1.1	0.8	0.9
May	0.6	0.2	1.1	0.3	0.5
June	1.0	0.9	1.2	0.8	1.0
July	1.0	0.7	0.9	0.6	0.7
August	0.6	0.7	0.6	1.9	0.6
September	0.8	1.0	0.2	0.5	0.8
October	1.7	1.2	2.9	0.6	1.5
November	2.2	1.5	1.0	1.3	2.4
December	1.1	1.6	2.2	0.9	1.7

The monthly monitoring at the five locations in Teralba have generally demonstrated that dust monitoring results comply with the dust deposition criteria. The installation of the high volume air sampler (HVAS) had not occurred at the date of this audit as the location had not been agreed with a landowner and EPA approval of the location is required when an agreement re the location is finalised.

4.4.6 Conclusion

The Air Quality Management Plan and dust control measures appear to be adequate for the Teralba Quarry operations and activities. Dust management issues generally arise when there are high wind events from the western quadrant which has the potential to result in dispersion of dust to the residential areas of Teralba village. Only two (2) complaints were received during 2013 related to dust (27 November dust on site from the crushing and screening plant; and 5 December 2013 dust leaving the site). The December complaint to the EPA was related to dust from the crushing plant and the plant was shut down when the wind strength caused dust dispersion from the site.

4.7 Water Management

[Project Approval Schedule 3 conditions 22 to 26]

4.7.1 Water Management Plan

[Project Approval Schedule 3 condition 26]

The Water Management Plan was prepared in August 2013 and submitted to DP&I. Comments on the Water Management Plan were provided to Metromix by DP&I on 16 January 2014:

> *Water Management Plan*
>
> *A revised Water Management Plan must be submitted that includes:*
>
> - *reporting procedures that compares the site water balance each calendar year in accordance with condition 26 (a) of schedule 3 of the project approval;*
> - *incident reporting requirements in accordance with condition 7 of schedule 5 of the project approval for all reporting procedures involving incidents;*
> - *a detailed description of the design objectives and performance criteria for the proposed water storages in accordance with sub-bullet point 2 of bullet point 3 of condition 26 (b) of schedule 3 of the project approval;*
> - *a detailed description of the design objectives and performance criteria for the control of water pollution from rehabilitated areas of the site in accordance with sub-bullet point 3 of bullet point 3 of condition 26 (b) of schedule 3 of the project approval;*
> - *groundwater assessment criteria, including trigger levels of investing any potentially adverse groundwater impacts in accordance with bullet point 2 of condition 26 (c) of schedule 3 of the project approval;*
> - *a program to monitor surface water inflows into the groundwater system beneath the site in accordance with sub-bullet point 2 of bullet point 3 of condition 26 (c) of schedule 3; and*
> - *a program to monitor the impacts of the project on the local aquifer in accordance with sub-bullet point 3 of bullet point 3 of condition 26 (c) of schedule 3.*
>
> *It is noted that the management and monitoring measures for surface water and groundwater in the Water Management Plan rely on the monitoring scheme established under Environment Protection Licence 536. It is considered that proactive water sampling prior to off-site water discharge would ensure the protection of local water resources, particularly against elevated nutrient and heavy metal contaminate levels. Please ensure that the revised Water Management Plan also includes consideration of proactive management measures or provides adequate justification for the proposed system.*

4.7.2 Conclusion

Metromix had not resubmitted the revised Water Management Plan to DP&I addressing the comments received on 16 January, at the date of this audit. The Water Management Plan had not been approved by DP&I at the date of this audit, but the implementation of the management measures in the draft Water Management Plan were being implemented to the Teralba Quarry operation and activities.

The revision of the Water Management Plan should also consider any revisions that may be required to address the conditions that result from the finalisation of the Notice of Variation to the EPL, as the water management and monitoring on the Teralba Quarry site is currently complying with the EPL draft conditions.

4.7.3 Site Water Balance

[Project Approval Schedule 3 condition 26(a)]

A Site Water Balance was prepared as part of the Environmental Assessment for the project product processing volumes, and the Site Water Balance forms part of the Water Management Plan - section 7.3. The Water Management Plan section 7.3.1 addresses water supply for the Teralba Quarry activities. The Water Management Plan including the Site Water Balance had not been approved by DP&I at the date of this audit.

4.7.3.1 Water Sources

Potable water for the Teralba Quarry site is directly sourced from the local water mains for amenities, drinking water and washing of equipment and road trucks on site. Potable water is also supplied to the asphalt plant for similar purposes.

Non-potable water is extracted from the Mine Adit Dam A, under Bore Licence No. 20BL173206 issued by the NSW Office of Water on 12 October 2012 (current until 11 October 2017). The Bore Licence allows for extraction of groundwater for Dewatering and Industrial –Sand and Gravel use to a maximum extraction rate of 1407 ML per year. Metromix will continue to source its non-potable water requirements from the Mine Adit Dam A in addition to the settled water from the silt cells for the various quarry water use activities. This non-potable water is used primarily for washing the extracted raw feed material from the quarry, dust control and wheel washes.

Flow monitoring (recorded from the installed water flow meters on the water supply line from the Mine Adit Dam A source) occurs continuously and water flow and water quality data is collected and reported as part of the EPL Annual Return and Annual Review under the Project Approval.

Water is recirculated throughout the Teralba Quarry operation of the processing plant, with waste water or slurry pumped to the silt cells for settling and evaporation when the water quality is unsuitable for reuse through the processing plant because of high suspended solid content.

A further source of water that may be used for the Teralba Quarry process plant can be accessed via the right to use stormwater collected in site storage dams (harvestable rights), governed under *Water Management Act 2000* clause 53. The combined maximum harvestable rights dam capacity (MHRDC) for the Teralba Quarry Site has been calculated at 24.37ML.

4.7.3.2 Water Use On-Site

The estimated water usage for Teralba Quarry processing plant was an average of approximately 1,243ML/yr, dust suppression water demand is estimated to require up to 20ML/yr due to the increase in exposed surface area from the quarry extensions, and additional wheel washes on site will require an estimated 24ML/yr. Overall, the use of non-potable water will be approximately 1,292ML per year of which approximately 70% will be recycled water through the on-site silt cells.

The Site Water Balance flow chart was produced for the Environmental Assessment – Teralba Quarry Extensions November 2011 Figure 4.7.3 below).

4.7.4 Surface Water Management

[Project Approval Schedule 3 condition 26(b)]

Surface Water Management was addressed as part of the Environmental Assessment for the project and the Surface Water Management Plan forms part of the overall Water Management Plan - section 7.1.

Existing Surface Water Quality is addressed in Section 7.1.3, clean water diversion and design objectives and performance criteria for site water management are addressed in section 8. Section 9.2 addresses performance criteria, including trigger levels; Section 9.3 addresses monitoring locations and frequency; Section 10 provides a review of the dirty water management system, and Section 11 corrective and preventative actions to respond to any exceedences of the performance criteria.

The Water Management Plan including the Site Water Balance had not been approved by DP&I at the date of this audit.

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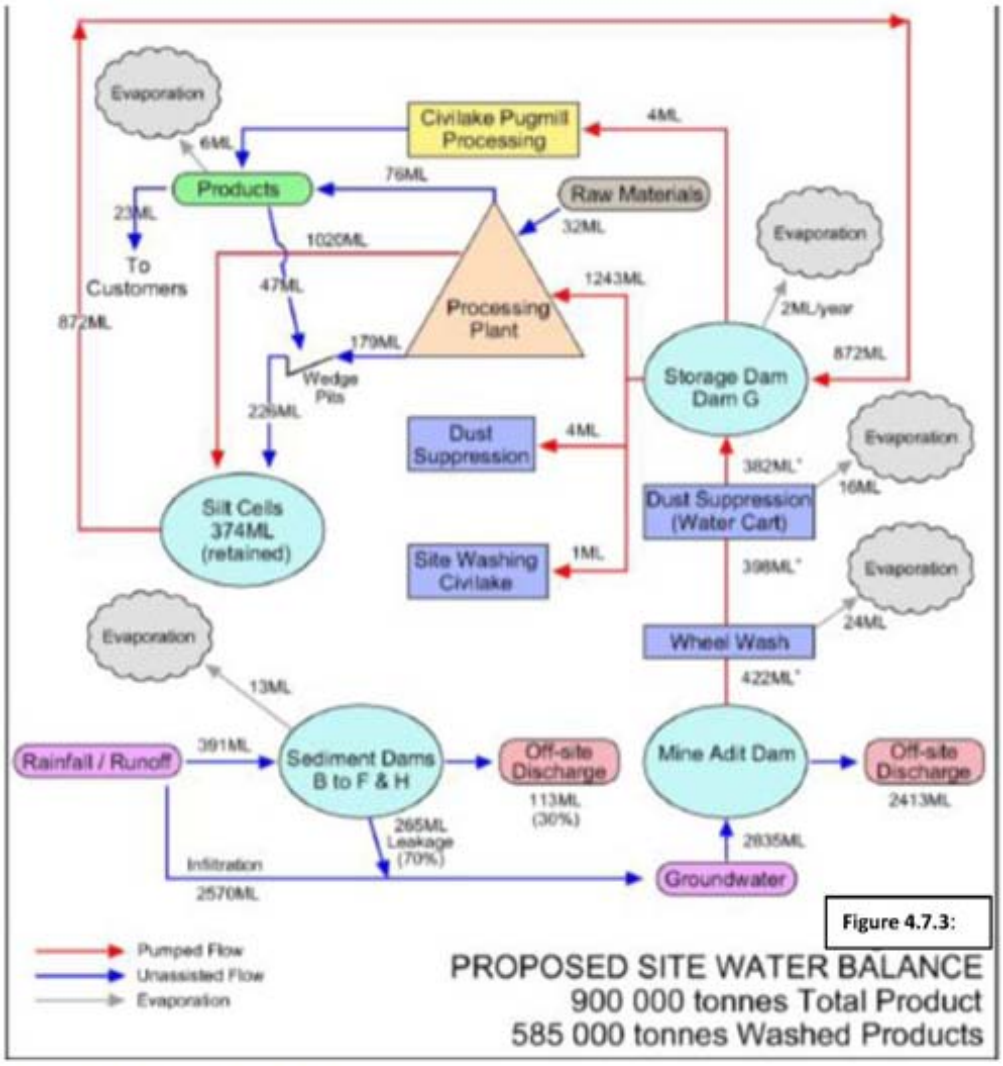


Figure 4.7.3:

4.7.4.1 Historical Surface Water Quality

Surface water discharge from the Teralba Quarry site has been monitored since September 1998 on a monthly basis, downstream of Mine Adit Dam A. Discharge from Mine Adit Dam A was largely groundwater sourced from mined voids of the Rhondda Colliery. Historically the daily discharge recorded immediately downstream of the Mine Adit Dam A averaged 4.5ML/d, over the period July 2000 to December 2008.

pH values of the water in Mine Adit Dam A have been generally within the range of 6.5-8.5 for all monitoring events with the exception of August 2002 when a recording of pH of 8.6 occurred.

Suspended solids concentrations have ranged from 1mg/L to 150mg/L over the period July 2000 to December 2008. The total suspended solids concentration has only exceeded 50mg/L on 11 occasions since 1998.

Electrical conductivity values have ranged from 2300µS/cm to 12,300µS/cm with a declining trend evident after 2006 (when salt water and waste water was no longer discharged into a coal seam in Rhondda Colliery). Electrical conductivity was found to be similar for both water in Mine Adit Dam A and monitoring conducted by Rhondda Colliery, downstream of the quarry site from the water course near the Teralba caravan park.

4.7.4.2 Surface Water Assessment Criteria

[Project Approval Schedule 3 condition 26(b)]
[EPL 0536 condition P1.3 L2.4 and M2.4]

The surface water monitoring program for Teralba Quarry has been prepared to satisfy Project Approval Schedule 3 condition 26(b) and EPL 0536 conditions P1.3, L2.4 and M2.4. Surface water monitoring has occurred in accordance with the EPL conditions P1.3, L2.4 and M2.3 at the four (4) EPA approved monitoring points 4, 5, 6 and 7.

Table ?: Teralba Quarry Monitoring Criteria (EPL condition L2.4 and M2.4)

Pollutant	100%ile Concentration Limit	Location	Sampling / Frequency
pH Total suspended solids (TSS) Flow rate	6.5 – 8.5 50 mg/l Kilolitres/day	***EPA monitoring Point 4*** **Overflow point from the Mine Adit Dam** labelled as "3" in Figure C titled "Water monitoring" attached to correspondence dated 20 Aug 2013 (EPA Ref: DOC13 / 45175). ***EPA monitoring Point 5:*** **Discharge at the end of pipe from Dam B** before entering the unnamed creek flowing to Lake Macquarie, labelled as "4" in Figure C titled "Water Monitoring" attached to correspondence dated 20 Aug 2013 (EPA Ref: DOC13 / 45175).	Grab Sample. pH and TSS once a month (min. of 4 wks) of water flowing off-site (**EPA monitoring Points 4, 5**). Flow meter/ continuous logger for flow rate / volume (**EPA monitoring Points 4, 5**).
pH Total suspended solids Electrical Conductivity (EC)	6.5 – 8.5 50 mg/l µS/cm	***EPA monitoring Point 6:*** **North-western boundary** of premises into unnamed north-western drainage line labelled as "5" in Figure C titled "Water Monitoring" attached to correspondence dated 20 August 2013 (EPA Ref: DOC13/45175). ***EPA monitoring Point 7:*** **North-eastern boundary** of premises into north-eastern drainage line labelled as "6" in Figure C titled "Water Monitoring" attached to correspondence dated 20 August 2013 (EPA Ref: DOC13145175).	Grab Sample. pH, TSS and EC Special Frequency 1 the licensee must monitor within 8 hours of commencing discharge and weekly thereafter during discharge of any water off-site (**EPA monitoring Points 6 and 7**).

4.7.4.3 Surface Water Monitoring

Water monitoring results from the EPA approved monitoring point 4 conducted during 2013 indicated compliance with the concentration limits in condition L2.4.

Water monitoring results from the EPA approved monitoring point 5 conducted during November 2013, exhibited non-compliance with the TSS concentration limits in condition L2.4. The measured TSS concentrations after heavy rainfall of 132mm on 18 November and 29mm on 19 November resulted in TSS levels of 293mg/l and 228 mg/l respectively for water from Dam D flowing over the spillway to Dams C & B.

4.7.5 Erosion and Sediment Control

[Project Approval Schedule 3 condition 26(b)]

The Erosion and Sediment Control Plan was prepared in August 2013 and submitted to DP&I. Comments were received from DP&I on 16 January 2014. DP&I had not approved the Water Management Plan including the Erosion and Sediment Control Plan at the date of this audit.

All structures installed for sediment and erosion control are planned to remain in place for the life of the Teralba Quarry or until they are no longer required.

Water Management Plan section 8 addresses clean water diversion and erosion and sediment controls, design objectives and performance criteria for site water management, design objectives and performance criteria for site water management, and section 8 also outlines options to improve storage and retention times. Water Management Plan Appendix 1 is a stand-alone Erosion and Sediment Control Plan and addresses the requirements of Project Approval Schedule 3 condition 26(b).

To mitigate against off-site surface water quality impacts, the design of quarrying operation procedures are undertaken to minimise the potential for erosion, and measures to control and treat sediment-laden waters implemented generally in accordance with *"Managing Urban Stormwater Volume 1* (Landcom, 2004) and Volume 2E *"Mines and Quarries"* (DECC, 2008).

"Dirty" water (sediment-laden water) on site is generated from surface water runoff flow within the areas south of Rhondda Road (which includes the Southern Extraction Area and Southern Extension). This runoff water is generally contained with the quarry area and either infiltrates into the underlying conglomerate or is captured and contained in a series of sediment ponds (Dams B, C, E, F, and H). Dam B is the final treatment (settlement pond) before discharge of any water can occur to the downstream environment.

Water generated in the processing area is largely collected in a temporary storage pit, (wedge pit), and then transferred to the silt cells in the western side of the Southern Extraction Area. Following settlement, water is recovered from the silt cells (and transferred to Dam G for re-use in the processing plant. Water from the wedge pit is directly pumped to Dam G.

The sediment and erosion control measures that form the basis of the Erosion and Sediment Control Plan for the Teralba Quarry site include ensuring that groundcover is maintained in areas not utilised for quarry operations, and vehicle movements on site are limited to existing tracks with delineated vehicle access to and from working areas to minimise surface disturbance and damage to adjacent vegetation. Barrier fencing is installed to delineate NO-GO zones.

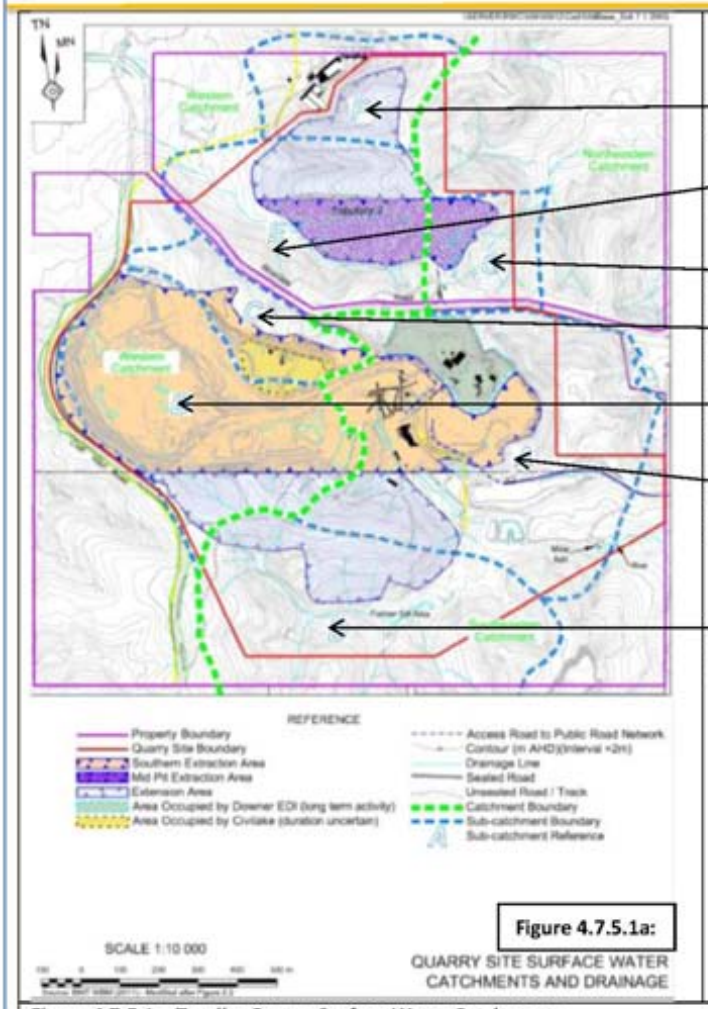
Revegetation has been undertaken progressively as quarry operation extraction is completed in active areas.

Soil stockpiles are maintained in accordance with *"Managing Urban Stormwater Volume 1* (Landcom, 2004) and Volume 2E *"Mines and Quarries"* (DECC, 2008).

- Stockpiles are located within the Southern Extraction Area or Mid Pit Extraction Area greater than 5m away from existing vegetation, surface water flow areas and access roads / tracks;
- All runoff from the stockpile areas is contained with the Southern Extraction Area or Mid-Pit Extraction Area; and
- All topsoil stockpiled is used for rehabilitation activities at the earliest possible time to provide viable soil and a seed bank for rehabilitation of the disturbed areas of the quarry and to reduce potential for erosion and sediment loss.

4.7.5.1 Sediment Dams

Existing sediment dams are located in the active Southern Extraction Area and the Mid-Pit Area of the Teralba Quarry site to collect surface runoff from the various catchment areas on site. The quarry site including existing operational areas and the approved extensions have seven (7) sub-catchments for surface water management (Refer to Figure 4.7.5.1 below).



Sub-catchment F - Northern extent of Project Site and Northern Extension Area (12.9ha).

Sub-catchment E – North of Rhondda Road. Mid Pit Extraction Area (22.9ha).

Sub-catchment G - North-east extent of Project Site. Mid Pit Extraction Area (20.4ha).

Sub-catchment C - Northern border of existing Southern Extraction Area (8.8ha)

Sub-catchment B - Western side of existing Southern Extraction Area (26.9ha)

Sub-catchment A - Eastern side of existing Southern Extraction Area and Southern Extension Area (48ha).

Sub-catchment D – South of existing Southern Extraction Area and Southern Extension Area (47ha).

Figure 4.7.5.1: Teralba Quarry Surface Water Catchments

The calculations for the sediment dam capacities were based on the New South Wales Department of Housing and Landcom's "Blue Book", *"Managing Urban Stormwater – Soils and Construction Volume 1 (2004)* for site soils as classified as "D/F". Selection of the rainfall is based on *"Managing Urban Stormwater, Soils and Construction, Volume 2E, Mines and Quarries'*, which recommends a 90th percentile ARI for areas planned to be disturbed greater than 3 years. Based on the predicted total cleared areas, the total storage volumes of the sediment dams were calculated as:

Storage	Description	Capacity (ML)	Surface Area(m^2)
Mine Adit Dam A	Flooded mine adit	1.2	400
Dam B	Final sediment dam	0.3	200
Dam C	Vegetated sediment dam	0.3	200
Dam D	Vegetated sediment dam	25.0	3,625
Dam E	Reed bed sediment dam	9.0	3,000
Dam F	Stockpile sediment dam	0.7	230
Dam G	Lined process water storage dam	10.8	2,700
Dam H	Initial sediment dam	4,000	1,440
Dam J	Sediment dam – Western Mid-Pit	36,000	-
Dam K	Sediment dam – Eastern Mid-Pit	2.0	-

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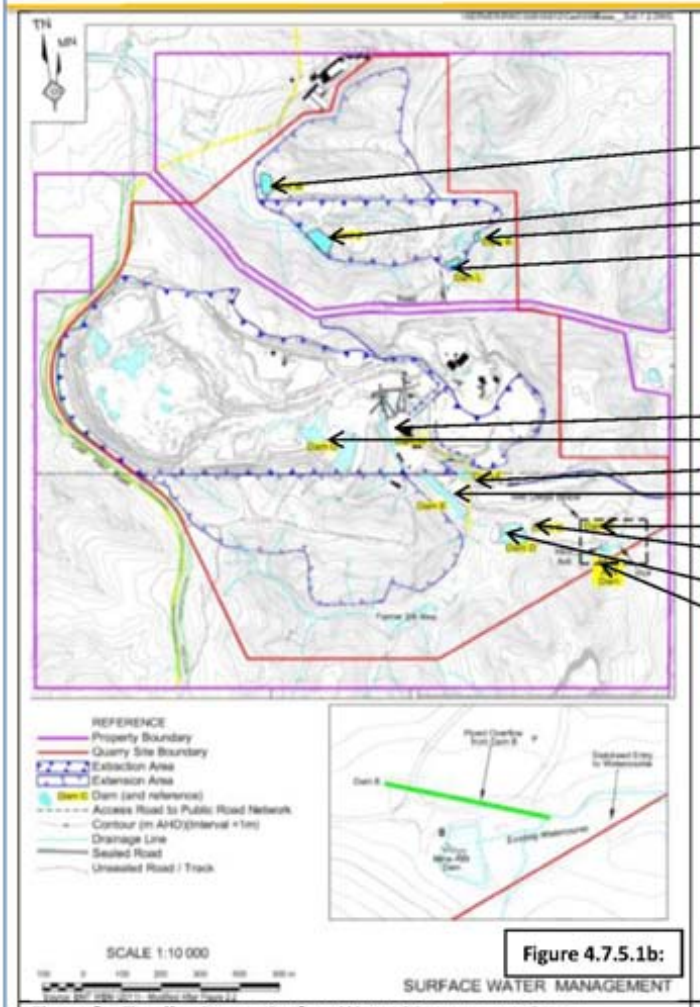

Figure ?: Teralba Quarry Surface Water Management Dams

4.7.5.2 Sediment Dam Operation

Recent rainfall (15 February 2014 and 2-3 March 2014 -100mm) runoff from the disturbed areas of the Teralba Quarry site was collected in the sediment dams (Dam J and K north of Rhondda Road, and Dams B, C, D and E in the Southern Extraction Area).

The collected water volume in the dams was reduced by infiltration into the underground workings or evaporation following the rainfall events. No treatment of the collected water was undertaken and no discharge occurred from Dams B - M.

Sediment dams inspected during the site visit exhibited minimal volumes of water after the February 2014 rainfall event, and small amounts of collected following the heavier rainfall event in early March 2014. Dam D collected water that represented approximately 30% of the dam capacity but no release to Dam C or Dam B occurred.

The only discharge of water occurred from Mine Adit Dam A following 2-3 March 2014 which was tested in accordance with the EPL condition and found to comply with the discharge water quality criteria in EPL condition L2.4.

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Dam K – eastern Mid-Pit (capacity 2ML) north of Rhondda Road. Total capacity still available after the February or March 2014 rain events.

Dam D - Vegetated sediment dam with the dam wall to be raised 2m to increase the capacity to 25ML. Total capacity still available for collection of runoff water after the February 2014 rain event.

Runoff water collected in Dam D following 100mm of rain on 2-3 March 2014. No discharge to Dam C or Dam B downstream occurred

Dam B – final sediment dam before release point from the site. Total capacity available for collection of runoff water after the February or March rain events.

Water discharge from Dam A (Mine Adit Dam) following 100mm rain 2-3 March 2014 was com pliant with the EPL discharge criteria.

4.7.5.3 Conclusion

The erosion and sediment control measures constructed on the Teralba Quarry site appear to have adequate capacity to retain and settle sediment containing runoff from the disturbed areas of the site. The calculations for the sediment dam capacities are conservative and the sediment dams inspected during the site visit had their design capacity available for collection and settlement of surface runoff. Recent rainfall events (15-16 February and 2-3 March 2014) had been managed within the sediment dams and the capacity of the dams were still capable of receiving further runoff in the event of additional heavy rainfall. No discharge had occurred from the sediment dams to the environment following the recent rains.

4.7.6 Groundwater Management

[Project Approval Schedule 3 condition 26(c)]

Groundwater management is included in the Water Management Plan section 7.2. The Water Management Plan was prepared in August 2013 and submitted to DP&I. Comments on the Water Management Plan were provided from DP&I on 16 January 2014 and included the following comments on groundwater:

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Water Management Plan

A revised Water Management Plan must be submitted that includes:

- *groundwater assessment criteria, including trigger levels of investing any potentially adverse groundwater impacts in accordance with bullet point 2 of condition 26 (c) of schedule 3 of the project approval;*
- *a program to monitor surface water inflows into the groundwater system beneath the site in accordance with sub-bullet point 2 of bullet point 3 of condition 26 (c) of schedule 3; and*
- *a program to monitor the impacts of the project on the local aquifer in accordance with sub-bullet point 3 of bullet point 3 of condition 26 (c) of schedule 3.*

The Water Management Plan will be revised to address the DP&I comments and resubmitted to DP&I for approval.

4.7.6.1 Existing Hydrogeology

The Teralba Quarry Site is underlain by the Newcastle Coal Measures. The nearest aquifer beneath the extraction areas is the mined Great Northern Coal Seam (GNCS) which lies below the existing floor of the quarry (at approximately 20m AHD). The primary aquifer in the region is contained within the strata and voids of the Great Northern Coal Seam. Aquifers present at greater depths include the Fassifern Coal Seam (FCS) (also extensively mined beneath the site).

Groundwater flows down dip beneath the site from the northern to south-south-eastern corner. Groundwater in the GNCS is partially intercepted within a mine adit located in the south-east of the site where the potential head of the groundwater intersects the surface topography. Here it is collected in a dam (the Mine Adit Dam A) before discharging into an open channel and eventually to Lake Macquarie via a concrete channel through the suburb of Teralba.

Operations at Teralba Quarry require water for conglomerate processing and this water is sourced from the Mine Adit Dam A under current NOW Bore Licence No. 20BL173206, to extract groundwater for Dewatering and Industrial –Sand and Gravel use, that allows for a maximum extraction of 1407 ML per year from the mine adit.

4.7.6.2 Groundwater Quality and Monitoring

Groundwater quality based on approximately monthly sampling undertaken by Coal and Allied (Rhondda Colliery) from the Mine Adit Dam A from 1989 to 2009 provided the following data:

Parameter	Concentration			ANZECC Freshwater Guideline 2000
		Range		
	Mean	Minimum	Maximum	
pH	7.1	6.2	8.6	6.5 to 8.5
Electrical Conductivity (EC) µS/cm	6541	471	13,600	No guideline
Total Suspended Solids (TSS) mg/L	21.4	0.5	248	50
Ammonia (as N) mg/L	0.23	0.0025	4.02	1.43
Total Kjeldahl Nitrogen (as N) mg/L	0.85	0.02	3.4	No guideline
Nitrates (as N) mg/L	0.25	0.0025	10.9	3.4
Chloride (Cl) mg/l	1,800	86	5,200	No guideline
Sulphate (SO4) mg/L	509	48	1,200	No guideline
Total Phosphorus (as P) mg/L	0.078	0.003	0.71	0.01
Bromide mg/L	6.59	0.1	50	No guideline
Fluoride mg/L	0.4	0.2	1.2	No guideline
Arsenic (As) µg/L	1.31	0.05	8.6	0.094
Boron (B) µg/L	0.45	0.07	1.0	0.68
Selenium (Se) µg/L	0.51	0.25	7	0.011
Zinc (Zn) µg/L	0.023	0.01	1.0	0.015

Monitoring of the Mine Adit water occurs monthly from EPL approved monitoring point 4 (EPL condition P1.3) during discharge from the site. The monthly water monitoring data has demonstrated compliance with the water assessment criteria:

Monthly Water Quality Monitoring EPA Approved Monitoring Point 4 – Mine Adit Discharge			
Parameter	Monitored Range	EPL Criteria	
pH	7.1 – 7.76	6.5 – 8.5	Compliant – September to December 2013
Total Suspended Solids (TSS) mg/l	<5 - 26	< 50	Compliant – September to December 2013
Electrical Conductivity (EC)	1890 - 2410	No EPL criteria	Compliant – September to December 2013

Nine (9) discharge events were recorded from EPA approved monitoring point 5 (discharge at the end of pipe from Dam B before entering the unnamed creek flowing to Lake Macquarie) between September and December 2013. Two incidents of increased TSS discharge from EPA approved monitoring point 5 occurred on 18 and 19 November 2013 following heavy rainfall events:

Monthly Water Quality Monitoring EPA Approved Monitoring Point 5 (Discharge at the end of pipe from Dam B)			
Parameter	**Monitored Range**	**EPL Criteria**	**Comments**
pH	7.7 – 8.0	6.5 – 8.5	No discharge Sep / Oct 2013
	7.2 - 8.0		Compliant Discharge during Nov /Dec 2013
Total Suspended Solids (TSS) mg/l	6 - 25	< 50	No discharge Sep / Oct 2013
	<5 – 293 (see comment)		Two (2) events of high TSS following heavy rain events: 18 Nov 2013 – 132mm (TSS 293 mg/l) 19 Nov 2013 – 29mm (228 mg/l)

4.7.6.3 Conclusions

The revision of the Water Management Plan to address the comments from DP&I on groundwater assessment criteria, including trigger levels, a program to monitor surface water inflows into the groundwater system beneath the site and a program to monitor the impacts of the project on the local aquifer, received on 16 January 2014 had still to be addressed and resubmitted to DP&I on the date of this audit.

Metromix has a current NOW Bore Licence No. 20BL173206 issued on 12 October 2012, to extract groundwater for Dewatering and Industrial –Sand and Gravel use, that allows for a maximum extraction of 1407 ML per year.

Water quality monitoring has demonstrated compliance with the EPL criteria for the Mine Adit monitoring point 4. The discharge water quality from EPA approved monitoring point 5 from Dam B was generally compliant with the EPL criteria. Intense rainfall events on 18 and 19 November 2013 resulted in overflow of Dam D resulting in high TSS levels being discharged downstream from Dam B.

It is recommended that the nomenclature used for the water monitoring locations be consistent with the EPA approved monitoring points identified in EPL condition P1.3.

4.8 Transport Management

[Project Approval Schedule 3 conditions 31 to 44]
[Statements of Commitment 9.1 to 9.8]

4.8.1 Transport Management Plan

[Project Approval Schedule 3 condition 44]

The Transport Management Plan was prepared by GTA Consultants Pty Ltd to satisfy Project Approval Schedule 3 condition 44 and was approved by DP&I on 10 October 2013.

The Traffic Management Plan (section 6.2) describes Competence Training and Awareness for all drivers / employees and covers site traffic rules, safe site delivery, Drivers Code of Conduct, maximum hourly despatch rates and operation and maintenance of wheel washes. All trucks leaving the Teralba Quarry site must also have their loads covered. Trucks were observed to comply with the covered load requirement during the audit site inspection.

4.8.2 Drivers Code of Conduct

The Teralba Quarry Traffic Management Plan Appendix 1 - Drivers Code of Conduct applies to all drivers (employees and contractors) involved in the transport of product on-site and off-site. Compliance with the Drivers Code of Conduct is mandatory for all personnel who operate vehicles on and off-site.

The Drivers Code of Conduct is comprehensive and identifies the travel routes and approved hours for transport activities associated with the operation of the quarry.

Disciplinary action is defined for drivers failing to meet the requirements of the Drivers Code of Conduct and/or Metromix receiving a confirmed complaint regarding individual vehicles or on-road driving behaviour.

The number of truck movements associated with the quarry activities and restricted time frames specified in the Project Approval Schedule 2 conditions 8 and 9 are recorded daily on the Truck Movement Reporting Forms. The number of laden trucks dispatched from the Teralba Quarry between July 2013 and January 2014, comply with the limits of hourly truck dispatch rates in Project Approval Schedule 2 condition 9.

The 2013 records have however shown a small number of non-compliances with the truck dispatch time limits. The reasons for the discrepancies resulted generally from contractors' preloaded at the Teralba Quarry the night before and leaving their depot next to the Quarry site the next morning prior to 6am, to make deliveries.

4.8.3 Wheel Wash Facilities

Wheel washes have been installed at the exits from the Teralba Quarry site to Rhondda Road and Railway Street from the Southern Extraction and Southern Extension Area and there is a wheel wash at the exit to Rhondda Road from the Northern Extension and Mid-Pit quarries (not being used as the northern quarries are not currently active and the relocatable wheel wash has been transferred to the south of Rhondda Rd).

The wheel washes have multiple water sprays that are activated when the truck proceeds slowly through the wheel wash. The efficiency of the wheel wash is determined by the speed at which the truck proceeds through the wash zone and is affected by the nature / moisture content of the material on the wheels. Trucks proceeding to Rhondda Road from the Road-base Product stockpile area travel on internal roads that have hard stand base onto paved roads to the exit gate after the wheel wash. Trucks leaving the site during the audit site inspection were not observed to be tracking dirt out of the site and Rhondda Road.

Wheel wash – exit to Railway Street from Southern Extraction Area

Wheel wash–exit to Rhondda Road from the Northern/Mid-Pit Area.

Rhondda Road surface at the exit from the Teralba Quarry and 200m from the quarry exit showing the clean state of the road with no tracking of dirt from the exiting trucks.

4.8.4 Conclusions

The Traffic Management Plan and Drivers Code of Conduct are adequate for the control of trucks and drivers associated with the transport of product from the Teralba Quarry.

The number of laden trucks dispatched from the Teralba Quarry between July 2013 and January 2014, comply with the limits of hourly truck dispatch rates in Project Approval Schedule 2 condition 9, however the 2013 records have recorded a small number of non-compliances with the truck dispatch times (the reasons for the discrepancies resulting generally from contractors' preloaded at the Teralba Quarry the night before and leaving their depot next to the Quarry site the next morning prior to 6am to make deliveries).

4.9 Waste Management

[Project Approval Schedule 3 condition 46 to 48]

4.9.1 Waste Management Plan

[Project Approval Schedule 3 condition 48]

A Waste Management Plan was prepared to satisfy Project Approval Schedule 3 condition 48 and approved by DP&I on 10 October 2013. Waste management hierarchy is the basis of the Teralba Quarry Waste Management Plan. The Plan identifies each waste stream and the Waste Management Matrix outlines the source / storage requirements / waste collection, treatment and disposal, and waste tracking requirements.

The various waste streams are separated / segregated into marked bins, and collection, reuse/ recycling and disposal is managed under contracts by licensed waste contractors:

Trans-Pacific (general waste, cardboard/ paper, plastics, waste oils and grease, air filters)
Sell Parker (batteries/scrap steel)
AusMulch (cleared timber for mulch)
Planet Ark (toner cartridges)
Tyres are reused on site for bund walls, traffic control barriers etc

Waste oil bunded storage area adjacent to the on-site workshop.

Bunded diesel tank adjacent to the waste oil and grease storage area.

4.9.2 Conclusions

Waste management on the site occurs in accordance with the Waste Management Plan. The management of the waste materials is considered to be satisfactory and the volumes of waste generated on the site from the Teralba Quarry activities. Waste is minimised where practicable and reuse / recycling occurs where possible to reduce waste going to landfill.

4.10 Heritage Management

[Project Approval Schedule 3 conditions 49]

4.10.1 Aboriginal Heritage Management Plan

[Project Approval Schedule 3 conditions 49]

An Aboriginal Heritage Management Plan was prepared in June 2013 to satisfy the requirements of this condition. The draft Aboriginal Heritage Management Plan was submitted to DP&I in August 2013 (i.e. within 6 months of the date of this Project Approval). Comments were received from DP&I on the draft Aboriginal Heritage Management Plan on 16 January 2014:

> *The Heritage Management Plan does not adequately address condition 49 (c) of schedule 3 regarding the measures that would be implemented for monitoring and managing unidentified Aboriginal objects and ensuring ongoing consultation with Aboriginal stakeholders.*
> *A revised Heritage Management Plan must be submitted that includes:*
> - *methods and measures for pre-clearance surveys conducted by appropriately qualified individual/s in high risk areas (i.e. creek/drainage lines within vegetated areas that have not been previously surveyed);*
> - *the invitation of local Aboriginal representatives on-site during clearance works to assist in the identification, management and handling of Aboriginal objects;*
> - *measures to ensure ongoing consultation with and involvement by the local Aboriginal community; and*
> - *measures to ensure any identified Aboriginal objects are appropriately managed and handled in accordance with the wishes of local registered Aboriginal stakeholders.*

The Aboriginal Heritage Management Plan will be revised to address the DP&I comments and resubmitted to DP&I for approval.

4.10.2 Conclusions

An Aboriginal Heritage Management Plan was prepared in June 2013 to satisfy the requirements of this condition. The draft Aboriginal Heritage Management Plan was submitted to DP&I in August 2013 (i.e. within 6 months of the date of this Project Approval). Comments were received from DP&I on the draft Aboriginal Heritage Management Plan on 16 January 2014. The revised Aboriginal Heritage Management Plan addressing the comments received from to DP&I on 16 January 2014 had not been prepared at the date of this audit. The Aboriginal Heritage Management Plan had not been approved by DP&I at the date of this audit.

4.11 Landscape Management

[Project Approval Schedule 3 conditions 50 to 58]

4.11.1 Landscape Management Plan

[Project Approval Schedule 3 condition 57]

A draft Landscape Management Plan dated January 2014 had been prepared with consultation with Lake Macquarie City Council, Department of Primary Industries Catchment and Lands Division and Hunter-Central Rivers Catchment Management Authority, Division of Resources and Energy, and the Office of Environment and Heritage to satisfy the Project Approval Schedule 3 condition 57. The Landscape Management Plan was planned for submission to DP&I in February 2014 (i.e. within 12 months of the granting of the Project Approval on 22 February 2013).

The Landscape Management Plan (section 10) addresses how the implementation of the Biodiversity Offset Strategy will be integrated with the overall rehabilitation of the site; describes the short, medium and long term measures for management of remnant vegetation and habitat on site; implementation of the Biodiversity Offset Strategy; compliance with the rehabilitation objectives and progressive rehabilitation obligations; and outlines Rehabilitation Performance and Completion Criteria.

The analysis of risks to the successful long term management of rehabilitated areas and long term security of the biodiversity offset assets has been conducted as part of the Landscape Management Plan and the risk analysis indicated that with the implementation of management /mitigation measures proposed by Metromix that the mitigated risk rating for all identified risks to rehabilitation and biodiversity offset management would be low:

Rehabilitation and Biodiversity Offset Area Risk Analysis

Risk Source / Event	Consequence	Likelihood	Unmitigated Risk Rating	Mitigation Measure or Activity(s)	Mitigated* Risk Rating
Final slopes on rehabilitated landform too steep or do not conform with approved final landform. Failure of rehabilitation or significant cost to rectify.	Moderate	Unlikely	Moderate	Ensure all final slopes are revegetated, with less than 1:3 (V:H) slope. Inspection and survey of final lopes prior to spreading soil.	Low
Ineffective sediment and erosion control. Potential for discharge of sediment-laden water is low as all extraction areas are internally draining.	Minor	Very Unlikely	Low	Inspect sediment and erosion control structures at EPL discharge points upon their completion and regularly thereafter.	Low
Insufficient soil/growth medium. Potential effect on rehabilitation success.	Moderate.	Unlikely	Moderate	Ensure soil (where present in sufficient thickness) is stripped, handled and stockpiled for reuse.	Low
Soil is adversely affected by long term storage. Potential effect on rehabilitation success.	Minor	Unlikely	Low	Minimise period of time soil is stockpiled where possible.	Low
Poor seed/tube stock quality or ineffective revegetation techniques. Potential effect on success of rehabilitation	Minor	Unlikely	Low	Ensure appropriate seed and/or tube stock is obtained from a seed collection program	Low
Inappropriate species types chosen for rehabilitation. Reduced biodiversity value of rehabilitation	Moderate	Unlikely	Moderate	Ensure species utilised in rehabilitation are consistent with the communities in the surrounding Biodiversity Offset Area	Low
Infestation of rehabilitated area(s) by weeds.	Minor	Possible	Moderate	Undertake ongoing weed control.	Low
Infestation of rehabilitation area(s) by feral animals	Minor	Possible	Moderate	Undertake, in consultation with surrounding landholders, pest control.	Low
Quarry infrastructure, including processing plant, buildings and ancillary equipment inappropriately or not completely removed.	Minor	Unlikely	Low	Appropriate contractual arrangements and close supervision of the demolition contractor.	Low
Poor visual amenity management. Noticeable change in skyline views from view shed areas	Moderate	Possible	Moderate	Ensure development of Stage 3 is only undertaken following establishment of vegetation on benches in Stage 1B.	Low

4.11.2 Biodiversity Offsets

[Project Approval Schedule 3 conditions 52 to 53]

The preparation and implementation for the long term security of the biodiversity assets will occur after approval of the Landscape Management Plan by OEH. The long term security of the biodiversity assets will be provided separately in the *BioBanking Management Plan* for the Teralba Quarry.

4.11.3 Rehabilitation

[Project Approval Schedule 3 conditions 55 and 56]

Rehabilitation of the previously disturbed areas of Teralba Quarry, has progressively occurred with native vegetation and communities. The restored areas demonstrate similar vegetation diversity and community structure to the surrounding environment.

The commencement of extraction operations in the Southern Extension Area Stage 1A in December 2013 principally related to the construction of the internal haul road and some vegetation clearance on the quarry face. As Stage 1A quarrying activities will not allow rehabilitation to be implemented until the Southern Extraction Area resource is exhausted, management measures to be undertaken during Stage 1A will reduce the visual impact of the disturbed area until extraction of the most elevated section of Stage 1A is undertaken during the final extraction period:

- Vegetation and Topsoil/Subsoil: Stripped vegetation and all available topsoil and subsoil will be either directly transferred to rehabilitate the completed Silt Cells (Silt Cell 1 or 2) or stockpiled (for approximately 3 months) near the silt cells the topsoil is reused for rehabilitation of the completed silt cells.
- Extraction: The construction of the internal haul road will allow extraction activities to commence from the surface of the western margin of Stage 1A, ensuring the retention of the most elevated section of Stage 1A (a ridge and remnant vegetation near the eastern margin of Stage 1A). This will shield the majority of operations from the eastern visual catchments until extraction activities can occur from below ground level.

4.12 Community Complaints

[Project Approval Schedule 5 condition

Community complaints received by Teralba Quarry are handled and actioned by the Quarry Manager. Only four (4) complaints were received between 22 February 2013 and February 2014 and the following actions occurred:

Date	Complaint / Issue	Response/Outcome
9 Sep 2013	Member of the community contacted us saying she thought a rock from a passing truck had broken her rear windscreen while parked on York St Teralba. She couldn't identify the truck.	The Quarry Manager visited the lady at her home and investigated the incident. Metromix paid for the rear windscreen to be replaced. She wrote to the Quarry Manager thanking the company and the people involved for their reliable and professional help.
9 Nov 2013	Teralba resident rang and left a message that he could hear Metromix Blasting.	The Quarry Manager contacted the resident explained that no blasts had taken place on site since the 22nd of October and the Company does not blast on Saturdays.
27 Nov 2013	Dust compliant from visitor to site of dust coming off crushing and screening plant	Not considered by site personnel to be plumes or excessive dust. No action taken.
5 Dec 2013	EPA received a complaint of dust leaving the Quarry Site at 4.45 pm on 5/12/2013.	According to the on site weather station, wings gusts were experienced at 4.45 pm on 5/12/2014. According to the crushing plant log, the crushing plant was shut down once the front came through.

5. CONCLUSIONS AND RECOMMENDATION

The independent environmental audit of the Teralba Quarry conducted in February 2014 indicates that the development is generally in accordance with the project description outlined in the *Environmental Assessment for the Teralba Quarry Extensions*, November 2011.

The site inspection, document review and discussions with relevant Teralba Quarry personnel were undertaken during the site visit and audit program in February 2014. Additional information for verification of compliance with the Project Approval conditions was provided by Metromix as requested by the auditor following the site visit.

The operation of the Teralba Quarry development is also generally in accordance with the predictions in the Environmental Assessments and demonstrates general compliance with the Project Approval conditions, Statements of Commitment and the Environment Protection Licence conditions.

The following recommendations are made in relation to the findings of the independent environmental audit:

Recommendation 1:
Water Management Plan
The revision of the Water Management Plan to address the comments received from DP&I on 16 January 2014 on groundwater assessment criteria, including trigger levels, a program to monitor surface water inflows into the groundwater system beneath the site and a program to monitor the impacts of the project on the local aquifer, should be addressed along with any relevant requirements under the draft Notice of Variation to the Environment Protection Licence No. 0536, and the revised document resubmitted to DP&I.

Recommendation 2:
Water Quality Monitoring
The nomenclature used for the water monitoring locations should be consistent with the EPA approved monitoring points identification numbers in Environment Protection Licence condition P1.3.

Recommendation 3:
Heritage Management Plan
The Aboriginal Heritage Management Plan should be revised to address the comments received from DP&I on 16 January, and the revised Plan resubmitted to DP&I for approval.

Overall Conclusion
The independent environmental audit findings confirm the Teralba Quarry Extension is being developed generally in accordance with the project description outlined in the Environmental Assessment for the Teralba Quarry Extensions November 2011.

The operation of the Teralba Quarry development is generally in accordance with the predictions in the Environmental Assessment and demonstrates compliance with the Project Approval conditions, Statements of Commitment and the Environment Protection Licence conditions.

Attachment A Project Approval 10_0183 conditions

Attachment B Statement of Commitments

Attachment C Environment Protection Licence No. 0536 conditions

Appendix 1 Consultation Letters to Relevant Agencies

Independent Environmental Audit – Teralba Quarry
February 2014
Attachment 1 - Project Approval 10_0183
Attachment 1 - Project Approval 10_0183
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Attachment 1 - Project Approval 10_0183

Condition No.	Project Approval condition	Verification	Comments	Compliance
	SCHEDULE 2 **ADMINISTRATIVE CONDITIONS**			
	OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT			
1.	In addition to meeting the specific performance criteria established under this approval, the Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the project.			**Noted**
	TERMS OF APPROVAL			
2.	The Proponent shall carry out the project generally in accordance with the: (a) EA; (b) statement of commitments; and (c) conditions of this approval. *Notes:* • *The general layout of the project is shown in Appendix 1 and Appendix 2.* • *The statement of commitments is reproduced in Appendix 3.*	• Environmental Assessment, Nov 2011 • Environmental Assessment, section 6 Statement of Commitments, Nov 2011 • Project Approval 10_0183	The Teralba Quarry Extension project is being developed generally in accordance with the Environmental Assessment November 2011, the conditions of Project Approval and general layout of the project Appendix 1 and Appendix 2 of the Project Approval.	**Compliant Ongoing**
3.	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.			**Noted**
4.	The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of: (a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with this approval; and (b) the implementation of any actions or measures contained in these documents.		Metromix have prepared and submitted the reports, strategies, plans, programs, reviews, audits required by the conditions of this Project Approval.	**Compliant Ongoing**
	LIMITS ON APPROVAL			
	Quarrying Operations			
5.	The Proponent may carry out quarrying operations on the site until 31 December 2038. *Note: Under this approval, the Proponent is required to rehabilitate the site and carry out additional undertakings 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 rehabilitation of the site and those undertakings have been carried out to a satisfactory standard.*			**Noted**
	Extractive Material Limits			
6.	The Proponent shall not carry out quarrying operations below 20 m AHD in the Southern Extension Area or below 24 m AHD in the Mid Pit Extraction and Northern Extension Areas. *Note: This condition does not apply to the construction of any*		Quarrying operations have not occurred to below 20 m AHD in the Southern Extraction or Southern Extension Area, or below 24 m AHD in the Mid Pit Extraction and Northern Extension Areas.	**Compliant Ongoing**

Condition No.	Project Approval condition	Verification	Comments	Compliance
	bores approved by NOW or pollution and sediment control structures described in the EA.			
7.	The Proponent shall not extract more than 1.2 million tonnes of extractive materials from the site in any calendar year.		Extraction of materials from the Teralba Quarry site was less than 1.2 million tonnes from February 2013 to February 2014.	Compliant
	Extractive Material Transport			
8.	The Proponent shall not: (a) transport more than 1 million tonnes of quarry products from the site in any calendar year; or (b) dispatch more than 326 laden trucks from the site on any day; or (c) dispatch more than 241 laden trucks per day or 20 per hour westwards along Rhondda Road; (d) dispatch more than 85 laden trucks per day or 8 per hour eastwards through Teralba; (e) dispatch laden trucks for travel through Teralba between 6 pm and 6 am; or (f) receive un-laden trucks via the Railway Street entrance between 6 pm and 7 am.	• Teralba Truck Movements, Aug 2013 • Teralba Truck Movements, Sep 2013 • Teralba Truck Movements, Oct 2013 • Teralba Truck Movements, Nov 2013 • Teralba Truck Movements, Dec 2013 • Teralba Quarry Traffic Non-compliances 2013	Transport of extracted materials from the Teralba Quarry site between February 2013 and February 2014 indicated: (a) less than 1 million tonnes of extracted material was transported from the site between February 2013 to February 2014 (b) laden trucks dispatched from the Teralba Quarry site have not exceeded 326 on any day; (c) laden trucks travelling westwards along Rhondda Road have not exceeded 241 per day or 20 per hour period; (d) laden trucks travelling eastwards through Teralba have not exceeded 85 per day or 8 per hours; (e) laden trucks have travelled eastward through Teralba prior to 6 am on 11 occasions between July 2013 and January 2014 (refer to Section 4.; (f) un-laden trucks are not received via the Railway Street entrance between 6 pm and 7 am.	Compliant Non-compliant Compliant
9.	The Proponent shall limit the total hourly truck dispatch rates from the site to the levels shown in Table 1. *Table 1 – Truck Dispatch Hours* Dispatch Period / Max Hourly Dispatch 6:00am – 7:00 am / Up to 28 loaded trucks 7:00am – 6:00pm / Up to 20 loaded trucks 6:00pm - 5:00am / Up to 6 loaded trucks 5:00am - 6:00am / Up to 12 loaded trucks *Note: Dispatch times and maximum hourly rates westwards along Rhondda Road or eastwards through Teralba are further limited by condition 8 above.*	• Teralba Truck Movements, Aug 2013 • Teralba Truck Movements, Sep 2013 • Teralba Truck Movements, Oct 2013 • Teralba Truck Movements, Nov 2013 • Teralba Truck Movements, Dec 2013 • Teralba Quarry Traffic Non-compliances 2013	The number of laden trucks dispatched from the Teralba Quarry between July 2013 and January 2014, comply with the limits of hourly truck dispatch rates in Project Approval Schedule 2 condition 9. Non-compliance with the truck dispatch time limits that have occurred are recorded by Teralba Quarry with reasons for the small number of dispatch discrepancies. The reasons for the discrepancies have resulted generally from contractors' preloaded at the Teralba Quarry the night before and leaving their depot next to the Quarry the next morning to make deliveries prior to 6am.	Generally Compliant
	Receival of Concrete, Virgin Excavated Natural Material and Excavated Natural Material			
10.	The Proponent shall not receive on site more than 120 tonnes of recycled concrete per day or stockpile more than 2,500 tonnes of concrete material on the site.		No concrete for recycling has been received on the site since July 2013.	Compliant
11.	The Proponent shall not receive on site more than 100,000 tonnes of virgin excavated natural material or excavated natural material in any calendar year.		No VENM or ENM received from February 2013 to February 2014.	Compliant

Independent Environmental Audit – Teralba Quarry — February 2014

Condition No.	Project Approval condition	Verification	Comments	Compliance
	SURRENDER OF CONSENTS			
12.	By the end of December 2013, or as otherwise agreed by the Director-General, the Proponent shall surrender the development consent (DA 130/42) for existing operations on the site in accordance with Section 104A of the EP&A Act. *Note: The conditions or other requirements of this project approval do not prevent the continued carrying out of development which may be undertaken pursuant to DA 130/42, prior to the surrender of that consent.*	Letter to DP&I re Surrender of DA 130/42 , 23 Dec 2013	Metromix surrendered DA 130/42 on 23 December 2013.	Compliant
	STRUCTURAL ADEQUACY			
13.	The Proponent shall ensure that any new buildings and structures, and any alterations, or additions to existing buildings and structures, are constructed: a) in accordance with the relevant requirements of the BCA; and b) to the satisfaction of the Mine Subsidence Board. *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.* - *Under Section 15 of the Mine Subsidence Compensation Act 1961 the Proponent is required to obtain approval from the Mine Subsidence Board for the construction, erection or alteration of any improvements on the site.*		No new buildings constructed on site between February 2013 and February 21014.	NA
	DEMOLITION			
14.	The Proponent shall ensure that all demolition work on site is carried out in accordance with AS 2601-2001: The Demolition of Structures, or its latest version.		No demolition of buildings or structures occurred between February 2013 and February 2014.	NA
	PROTECTION OF PUBLIC INFRASTRUCTURE			
15.	The Proponent shall: (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the project; and (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the project.		No public infrastructure has been damaged or relocated as a result of the project between February 2013 and 2014.	Not activated
	PLANNING AGREEMENT			
16.	Within 12 months of the date of this approval, unless otherwise agreed by the Director-General, the Proponent shall enter into a planning agreement with the Council in accordance with Division 6 of Part 4 of the EP&A Act that provides for payment to the Council for road maintenance levies. The agreement must include provision for those matters set out in condition 17 below. If there is any dispute between the Proponent and Council relating to the preparation or implementation of the planning agreement, then either party may refer the matter to the Director-General for resolution.	• Project Approval 10_0183, granted 22 Feb 2013	Metromix have consulted with the Council in relation to a planning agreement in accordance with Division 6 of Part 4 of the EP&A Act that provides for payment to the Council for road maintenance levies. Metromix agreed to pay the Council the $0.066/t/km. The Council lawyers had not completed the draft agreement for signing by the two parties at the date of this audit.	Compliant

Attachment 1 - Project Approval 10_0183 4

Condition No.	Project Approval condition	Verification	Comments	Compliance
	ROAD MAINTENANCE			
17.	During the life of the project, for each calendar year, the Proponent shall pay Council $0.066 per tonne per kilometre for every tonne of quarry products transported from the site on roads for which Council is liable for road maintenance funding. Each payment must be: (a) based on weighbridge records of the quantity of quarry products transported from the site; (b) paid by the date required by the invoice issued by Council; and (c) increased over the life of the project in accordance with the CPI.	• CCC Meeting Minutes, 27 Nov 2013	Metromix have consulted with the Council in relation to the agreement for the payment of the 0.66c per tonne per kilometre (/t/km) for every tonne of quarry products transported from the site on roads for which Council is liable for road maintenance funding. Metromix agreed to pay the Council the $0.066/t/km. The Council lawyers had not completed drafting the agreement for signing by the two parties at the date of this audit.	**Compliant Ongoing**
	OPERATION OF PLANT AND EQUIPMENT			
18.	The Proponent shall 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.		Metromix have a workshop on-site and the Metromix plant and equipment used on site is maintained and operated in a proper and efficient condition	**Compliant Ongoing**
	STAGED SUBMISSION OF ANY STRATEGY, PLAN OR PROGRAM			
19.	With the approval of the Director-General, the Proponent may submit any strategy, plan or program required by this approval on a progressive basis. *Notes:* • *While any strategy, plan or program may be submitted on a progressive basis, the Proponent will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times; and* • *If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.*	• Environmental Management Strategy, Aug 2013 • Air Quality Management Plan, Sep 2013 • Blast Management Plan, Sep 2013 • Noise Management Plan, Nov 2013 • Transport Management Plan, Sep 2013 • Waste Management Plan, Sep 2013 • Water Management Plan, Aug 2013	The Environmental Management Strategy, Environmental Management Plans and Environmental Monitoring Programs required under the Project Approval were prepared and submitted to DP&I on the due dates.	**Compliant Ongoing**
	PRODUCTION DATA			
20.	The Proponent shall: (a) provide annual quarry production data to DRE using the standard form for that purpose; and (b) include a copy of this data in the Annual Review (see condition 4 of schedule 5).		Annual production data will be reported to the DRE and the data will be included in the Annual Review (first Annual Review is due in March 2014).	**In progress**
	SCHEDULE 3 **ENVIRONMENTAL PERFORMANCE CONDITIONS**			
	IDENTIFICATION OF APPROVED LIMITS OF EXTRACTION			
1.	Prior to carrying out quarrying operations under this approval, the Proponent shall: (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction within the Extraction Areas; and	• Boundary Survey Plan, Southern Extension, Moutrie Survey, Jun 2013 • Compendium of	The boundaries of the approved limits of extraction for the Teralba Quarry lease activities have been marked out by a registered surveyor and the boundaries marked with coloured poles for the	**Compliant**

Condition No.	Project Approval condition	Verification	Comments	Compliance
	(b) submit a survey plan of these boundaries to the Director-General.	Documents for DP&I, Sep 2013	various activity areas.	
2.	While ever quarrying operations are being carried out, the Proponent shall ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff and inspecting officers to clearly identify the limits of extraction within the Southern, Southern Extension, Mid Pit and Northern Extension Extraction Areas.		The boundaries of the approved limits of the Teralba Quarry lease activities have been marked with coloured poles for the various areas: • White poles - Stage 1A, • Yellow poles – quarry extraction limits • Blue poles - Council Pugmill Area • Green poles – Downer Signage is to be placed on the posts to specifically identify each of the active areas of works within the Teralba Quarry lease boundaries.	**Compliant Ongoing**
	EXTRACTION MANAGEMENT			
	Operating Conditions			
3.	The Proponent must ensure that: (a) the underlying historical coal workings within the Great Northern coal seam pose not greater than a negligible risk to the safety of quarry workers, including risks from sudden unplanned collapses, release of noxious gases or explosion of flammable gases; and (b) quarrying operations pose not greater than a negligible risk to the heating or combustion of the underlying historical coal workings within the Great Northern coal seam.	• Teralba Quarry Extension Geotechnical Assessment, Mar 2006 • Preliminary comments on Quarry Operations – Interactions with On-site Coal Resource, 28 Nov 2012 • Lower Level Extraction Plan, January 2013	The management of the Teralba Quarry operations above the underlying historical coal workings within the Great Northern coal seam address the requirements that the safety of quarry workers, including risks from sudden unplanned collapses, release of noxious gases or explosion of flammable gases and the risk of heating or combustion of the underlying historical coal workings within the Great Northern coal seam, are considered and management measures implemented to ensure negligible risk.	**Noted**
	Lower Level Extraction Management Plan			
4.	The Proponent shall prepare and implement a Lower Level Extraction Plan for all extraction activities within 17.5 vertical metres of historical coal workings within the Great Northern coal seam, to the satisfaction of the Director-General. This plan must: (a) be submitted for approval to the D-G prior to undertaking any such quarrying operations and within 12 months of the date of this approval; (b) be prepared by suitably qualified persons approved by the Director-General; (c) provide for the achievement of the measures set out in condition 3 above; (d) describe the measures that would be implemented to ensure: • best management practice quarrying operations are being employed on site; • individual responsibilities of workers, contractors and management are detailed and understood; and • compliance with the relevant conditions of this approval; (e) include a Spontaneous Combustion Management Plan, which has been prepared in consultation with DRE and Oceanic Coal Pty Ltd, to manage the potential risks and impacts of spontaneous	• Lower Level Extraction Plan, January 2013 • Teralba Quarry Extension Geotechnical Assessment, Mar 2006 • Preliminary comments on Quarry Operations – Interactions with On-site Coal Resource, 28 Nov 2012	(a) A draft Lower Level Extraction Plan has been prepared (dated January 2013) and is planned for submission to the D-G by 22 February 2014. (b) Mining Operation Services (MOS) was and G E Holt & Associates (GHA) on the Teralba Quarry, particularly with regard to drill, blast and extraction processes above under-ground workings, and management of spontaneous combustion and gas hazards. (c) To be developed (d) To be developed (e) Section 7 – Spontaneous Combustion: • Section 6 – Noxious Gases and Spontaneous Combustion details the assessment, of the risks of spontaneous combustion and subsurface heating for each of the existing and proposed Extraction Areas; • Section 5 – Practical Application of Stand-off Distance the following areas were defined:	**In progress**

<table>
<tr><th>Condition No.</th><th>Project Approval condition</th><th>Verification</th><th>Comments</th><th>Compliance</th></tr>
<tr><td></td><td>combustion or heating of coal, and which:
• includes a detailed assessment, of the risks of spontaneous combustion and subsurface heating for each of the existing and proposed Extraction Areas;
• clearly identifies responsibilities to address management of spontaneous combustion and subsurface heating risks, for both day to day operations and long term management; and
• includes appropriate short and long term contingency plans.</td><td></td><td><table><tr><th>Area</th><th>Stand-off Distance</th></tr><tr><td>No underground workings</td><td>Negligible risk, no stand-off distance</td></tr><tr><td>First workings only</td><td>12 metres</td></tr><tr><td>Pillar extraction only</td><td>12 metres</td></tr><tr><td>Floor stripping and some associated pillar extraction with a higher risk from workings up to 6m high</td><td>17.5 metres</td></tr></table></td><td></td></tr>
<tr><td></td><td>NOISE</td><td></td><td></td><td></td></tr>
<tr><td>5.</td><td>The Proponent shall ensure that the noise generated by the project does not exceed the criteria in Table 2 at any residence on privately-owned land.
Table 2: Noise criteria dB(A)<table><tr><th>Location</th><th>Day 6-7am</th><th>Day 7am-6pm</th><th>Evening 6-10pm</th><th>Night 10pm-6am</th></tr><tr><td>A</td><td>38</td><td>38</td><td>37</td><td>35</td></tr><tr><td>B</td><td>42</td><td>46</td><td>36</td><td>35</td></tr><tr><td>C</td><td>42</td><td>42</td><td>35</td><td>35</td></tr><tr><td>D, E, G, H, I</td><td>35</td><td>35</td><td>35</td><td>35</td></tr><tr><td>F</td><td>37</td><td>38</td><td>38</td><td>35</td></tr></table>Notes:
• Receiver locations are shown in Figure 2 Appendix 1.
• Noise generated by the project is to be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.
However, these criteria do not apply if the Proponent has a written agreement with the relevant landowner to exceed the criteria, and the Proponent has advised the Department in writing of the terms of this agreement.</td><td>EPL condition L5.1</td><td>No noise monitoring had been conducted for the Teralba Quarry Extension at the time of this audit as the works associated with the Southern Extension Area had only commenced in December 2013 and there was no quarrying activity taking place in the Northern Extension area.

The EPL Variation for the Teralba Quarry Extension had not been issued at the date of this audit and the existing EPL 0536 did not have any noise criteria or monitoring frequency requirements for the project.

No noise complaints have been received by Metromix in relation to the Teralba Quarry activities.

No agreements have been made with any relevant landowners in relation to noise</td><td>Ongoing</td></tr>
<tr><td></td><td>Hours of Operation</td><td></td><td></td><td></td></tr>
<tr><td>6.</td><td>The Proponent shall comply with the operating hours set out in
Table 3: Operating Hours<table><tr><th>Day</th><th>Receipt of Concrete or VENM</th><th>Loading/Dispatch of trucks</th><th>Extraction & Processing Operations</th></tr><tr><td>Mon-Fri</td><td>7am - 5pm</td><td>4am Monday to Midnight Friday</td><td>7am - 7pm</td></tr><tr><td>Saturday</td><td>7am - 2pm</td><td>Midnight Friday to 6pm Saturday</td><td>7am - 2pm</td></tr><tr><td>Sundays and Public Holidays</td><td>None</td><td>None</td><td>None</td></tr></table>Note: Maintenance activities may occur at any time provided they are inaudible at privately-owned residences.</td><td></td><td>Hours of operation of the Teralba Quarry activities are in accordance with the limits in Project Approval Schedule 3 condition 6.</td><td>Compliant</td></tr>
</table>

Condition No.	Project Approval condition	Verification	Comments	Compliance
	Operating Conditions			
7.	The Proponent shall: (a) implement best practice noise management to minimise the construction, operational and traffic noise of the project; (b) minimise the noise impacts of the project during meteorological conditions when the noise limits in this approval do not apply; (c) maintain the effectiveness of any noise suppression equipment on plant at all times and ensure defective plant is not used operationally until fully repaired; (d) regularly assess noise monitoring data and relocate, modify, and/or stop operations on site to ensure compliance with the relevant conditions of this approval; to the satisfaction of the Director-General.	• Noise Management Plan Nov 2013	The Noise Management Plan section 8 outlines control measures to be implemented and describes the noise management practices to be implemented on the site: (a) Section 8.4 addresses noise management associated with Traffic Operations (e.g. beepers have been removed and vehicles and equipment fitted with quackers to reduce noise emissions); (b) Section 8.5 addresses operational noise management under adverse weather conditions; (c) Section 8.3 addresses effectiveness of any noise suppression equipment on plant and maintenance to ensure defective plant is not operated until it is fully repaired. (d) Section 9 outlines Evaluation of Compliance	**Compliant**
	Noise Management Plan			
8	The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Director-General. This plan must: (a) be submitted for approval to the Director-General within 4 months of the date of this approval; (b) describe the measures that would be implemented to ensure: • best management practice is being employed on site; • the noise impacts of the project are minimised during any meteorological conditions when the noise limits in this approval do not apply; and • compliance with the relevant conditions of this approval; (c) describe the proposed noise management system in detail; and (d) include a monitoring program that: • is capable of regularly evaluating the performance of the project, including noisy individual items of plant, such as haulage trucks and the bulldozer; • includes a protocol for determining any exceedances of the relevant conditions in this approval at locations listed in Table 2; and • evaluates and reports on the effectiveness of the noise management system on site.	• Noise Management Plan, 31 Jul 2013 • Letter form DP&I re Comments on Noise Management Plan, 15 Aug 2013 • Noise Management Plan dated Nov 2013 • Letter from DP&I re Approval of Noise Management Plan, 16 Jan 2014	A Noise Management Plan was prepared and submitted to DP&I on 31 July 2013. DP&I responded with comments on 15 August 2013 and required the Noise Management Plan to be revised and re-submitted for approval. (a) The Noise Management Plan was submitted to DP&I on 31 July 2013 and the revised Plan approved on 16 January 2014; (b) Noise Management Plan section 8 describes Control Measures for noise from the quarry and transport operations, and management under adverse weather conditions. Section 9 describes Noise Monitoring Protocol and Evaluation of Compliance. (c) Noise Management Plan describes the overall noise management system (d) Noise Management Plan Section 9 describes Noise Monitoring Protocol and Evaluation of Compliance. (e) Noise Management Plan section 9 addresses Corrective and Preventative Actions and section 11 addresses Information and Communication and Incident Reporting.	**Compliant**
	BLASTING			
	Blasting Criteria			
9.	The Proponent shall ensure that the blasting on the site does not cause exceedances of the criteria in Table 4.		The 32 blasts conducted between January 2013 and December 2013 were monitored and there were no recorded overpressure results greater than 115dB(L) and no vibration measurements recorded greater	

<table>
<tr><th>Condition No.</th><th>Project Approval condition</th><th>Verification</th><th>Comments</th><th>Compliance</th></tr>
<tr><td></td><td>Table 4: Blasting criteria
<table><tr><th>Location</th><th>Airblast Overpressure (dB(Lin Peak)</th><th>Ground Vibration (mm/s)</th><th>Allowable exceedance</th></tr><tr><td rowspan="2">Any residence on privately owned land, or any public infrastructure</td><td>120</td><td>10</td><td>0%</td></tr><tr><td>115</td><td>5</td><td>5% of the total number of blasts over a 12 mth period</td></tr></table>However, these criteria do not apply if the Proponent has a written agreement with the relevant owner or infrastructure provider / owner, and the Proponent has advised the Department in writing of the terms of this agreement.</td><td></td><td>than 5mm/s.

One complaint was received on 11 January 2013 (i.e. before the current approval) from a Teralba resident (overpressure result <100bD(L) and vibration <0.8mm/s).

All blast monitoring results less than the specified criteria.

No agreements have been made with any relevant landowners in relation to blasting.</td><td>Compliant Ongoing</td></tr>
<tr><td></td><td>Blasting Hours</td><td></td><td></td><td></td></tr>
<tr><td>10.</td><td>The Proponent shall only carry out blasting on site between 10 am and 4 pm Monday to Friday inclusive. No blasting is allowed on weekends or public holidays, or at any other time without the written approval of Director-General.</td><td>• Blast Monitoring Results Teralba Quarry, 2013</td><td>All blasts conducted at the Teralba Quarry have occurred between 10:00am and 4:00pm.</td><td>Compliant</td></tr>
<tr><td></td><td>Blasting Frequency</td><td></td><td></td><td></td></tr>
<tr><td>11.</td><td>The Proponent shall not carry out more than 1 blast a day on site, unless an additional blast is required following a blast misfire.
Note: A blast may involve a number of explosions within a short period, typically less than two minutes.</td><td>• Blast Monitoring Results Teralba Quarry, 2013</td><td>Between February 2013 and December 2013 more than one blast conducted in one day occurred on 5 occasions on the following dates:
<table><tr><th>Date</th><th>Times</th><th>Location</th></tr><tr><td>3/6/13</td><td>10:55 & 12:00</td><td>Southern bench double primed hole</td></tr><tr><td>20/6/13</td><td>11:10 & 12:05</td><td>Southern bench dummy hole</td></tr><tr><td>27/9/13</td><td>11:50 & 12:58</td><td>S2 Area</td></tr><tr><td>21/10/13</td><td>12:28 & 12:28</td><td>S2 Area</td></tr><tr><td>11/11/13</td><td>10:32 & 13:50</td><td>S2 Area</td></tr></table>The number of blasts conducted on any one day, are generally compliant with Project Approval Schedule 3 condition 11.</td><td>Compliant</td></tr>
<tr><td></td><td>Property Inspections</td><td></td><td></td><td></td></tr>
<tr><td>12.</td><td>If the Proponent receives a written request from the owner of any privately-owned land within 500 m of proposed blasting for a property inspection to establish the baseline condition of any buildings and/or structures on his/her land, or to have a previous property inspection report updated, then within 2 months of receiving this request the Proponent shall:</td><td></td><td>No blasting has occurred within 500m of any buildings and/or structures on privately owned land.</td><td>Not activated</td></tr>
</table>

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Condition No.	Project Approval condition	Verification	Comments	Compliance
	(a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to: • establish the baseline condition of any buildings and/or structures on the land, or update the previous property inspection report; and • identify any measures that should be implemented to minimise the potential blasting impacts of the project on these buildings and/or structures; and (b) give the landowner a copy of the new or updated property inspection report.			
	Property Investigations			
	If the owner of any privately-owned land claims that the buildings and/or structures on his/her land have been damaged as a result of blasting on site, then within 2 months of receiving this claim in writing from the landowner the Proponent shall: (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties, to investigate the claim; and (b) give the landowner a copy of the property investigation report. If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Proponent shall repair the damages to the satisfaction of the Director-General. If the Proponent or landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Director-General for resolution.			**Not activated**
	Operating Conditions			
14.	During blasting operations, the Proponent shall: (a) implement best management practice to: • protect the safety of people and livestock in the surrounding area; • protect public or private infrastructure/property in the surrounding area from any damage; and • minimise the dust and fume emissions of any blasting; and (b) operate a suitable system to enable the public to get up-to-date information on the proposed blasting schedule on site, to the satisfaction of the Director-General.	• Blast Management Plan, Sep 2013	The Blast Management Plan provides (a) section 7 Surrounding Residences and Potential Blast-Related Impacts and section 8 Control Measures for properties, safety, fly-rock / dust / fume management, and airblast overpressure; (b) section 14 addresses Publication of Blast information on the Metromix website and monitoring results will also be presented at CCC Meetings.	**Compliant**
15.	The Proponent shall not undertake blasting within 500 metres of: (a) any public road without the approval of Council; or (b) any land outside the site not owned by the Proponent, unless: • the Proponent has a written agreement with the relevant landowner to allow blasting to be carried out closer to the land, and the Proponent has advised the Department in writing of the terms of this agreement, or • the Proponent has:		Blasting had not occurred between February 2013 and February 2014: (a) within 500m of a public Road; or (b) within 500m of any residences or any land or buildings / structures outside the Teralba Quarry site operations owned by the Metromix.	**Compliant**

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Condition No.	Project Approval condition	Verification	Comments	Compliance
	o demonstrated to the satisfaction of the D-G that the blasting can be carried out closer to the land without compromising the safety of the people or livestock on the land, or damaging the buildings and/or structures on the land; and o updated the Blast Management Plan to include the specific measures that would be implemented while blasting is being carried out within 500 metres of the land.			
	Blast Management Plan			
16.	The Proponent shall prepare and implement a Blast Management Plan for the project to the satisfaction of the Director-General. This plan must: (a) be submitted to the Director-General for approval within 4 months from the date of project approval; (b) be prepared in consultation with the Council and interested members of the local community potentially affected by blasting operations; (c) describe the measures that would be implemented to ensure: • best management practice is being employed; and • compliance with the relevant conditions of this approval; (d) include a road closure management plan for blasting within 500 metres of a public road, that has been prepared in consultation with Council; (e) include a specific blast fume management protocol to demonstrate how emissions will be minimised including risk management strategies if blast fumes are generated; and (f) include a monitoring program for evaluating the performance of the project including: • compliance with the applicable criteria; and • minimising fume emissions from the site.	• Letter to DP&I re Submission of Blast Management Plan, 6 Sep 2013 • Blast Management Plan, Sep 2013 • Letter from DP&I re Approval of Blast Management Plan, 10 Oct 2013	A Blast Management Plan was prepared to satisfy Project Approval Schedule 3 condition 16 and submitted to DP&I on 6 September 2013. DP&I approved the Blast Management Plan on 10 October 2013: (a) Blast Management Plan submitted to DP&I on 6 September 2013; (b) The Blast Management Plan was prepared in consultation with the Lake Macquarie City Council and residents of Teralba (Rhondda Road, Watkins Lane, Rodgers Street, Railway Street, Pitt Street, Myrtle Street and James Street); (c) Blast Management Plan section 8 presented Control Measures; (d) Blast Management Plan section 7.2.4 states *"there will no need to close Rhondda Road for short periods during a blast as the closest blasting location is 11pprox.. 400m north of the closest blasting within the Southern Extension."* (e) Blast Management Plan section 7.2.5 addresses blast fume potential and management; (f) Blast Management Plan section 9 provides blast and fume monitoring and section 10 addresses Evaluation of Compliance.	**Compliant**
	AIR QUALITY			
	Air Quality Criteria			
17.	The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the project do not exceed the criteria in Tables 5 to 7 at any residence on privately-owned land, or on more than 25% of any privately-owned land.	• Air Quality Management Plan, section 8, Sep 2013	The Air Quality Management Plan section 8 presents potential dust sources and key control procedures and measures adopted for the management of particulate matter emissions generated by the project to ensure dust emissions from the Teralba Quarry activities do not exceed the criteria in Tables 5 to 7 at any residence on privately-owned land.	**Compliant**

<table>
<tr><th>Condition No.</th><th>Project Approval condition</th><th>Verification</th><th>Comments</th><th>Compliance</th></tr>
<tr><td>17.</td><td>Table 5: Long-Term Impact Assessment Criteria for Particulate Matter
<table><tr><th>Pollutant</th><th>Averaging Period</th><th>Criterion</th></tr><tr><td>Total Suspended Particulates</td><td>Annual</td><td>90 µg/m3</td></tr><tr><td>Particulate Matter <10µm (PM10)</td><td>Annual</td><td>30 µg/m3</td></tr></table>Table 6: Short Term Impact Assessment Criteria for Particulate Matter
<table><tr><th>Pollutant</th><th>Averaging Period</th><th>Criterion</th></tr><tr><td>Particulate Matter <10µm (PM10)</td><td>24 hour</td><td>50 µg/m3</td></tr></table>Table 7: Long-Term Impact Assessment Criteria for Deposited Dust
<table><tr><th>Pollutant</th><th>Averaging Period</th><th>Max increase in Deposited Dust Level</th><th>Max Total Deposited Dust Level</th></tr><tr><td>Deposited dust</td><td>Annual</td><td>2g/m2/mth</td><td>4g/m2/mth</td></tr></table>Notes to Tables 5-7:
a - Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to all other sources);
b - Incremental impact (ie incremental increase in concentrations due to the project on its own);
c - 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.
d - Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Director-General in consultation with EPA.</td><td>• Air Quality Management Plan, section 8, Sep 2013</td><td>The Air Quality Management Plan section 9 describes the Air Quality Monitoring program to be conducted:
• Five (5) dust deposition gauges are located to the east of the Teralba Quarry and on the outskirts of Teralba:
○ Hillside Crescent (established June 2004)
○ Myrtle Street (established June 2004)
○ Rhondda Road (established June 2004)
○ Rodgers Street (established April 2011)
○ Margaret Street (established April 2011)
• A High Volume Air Sampler (HVAS) with PM10 is to be installed at a western most property adjacent to Rhondda Road in Teralba. The location of the HVAS and agreement with the land owner need to be approved by the EPA when a site is selected and available to comply with AS/NA 3580.</td><td>Compliant
In progress</td></tr>
<tr><td></td><td>Greenhouse Gas Emissions</td><td></td><td></td><td></td></tr>
<tr><td>18</td><td>The Proponent shall implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site.</td><td></td><td></td><td>Noted</td></tr>
<tr><td></td><td>Operating Conditions</td><td></td><td></td><td></td></tr>
<tr><td>19</td><td>The Proponent shall:
(a) implement best management practice to minimise the dust emissions of the project;</td><td>• Air Quality Management Plan, Sep 2013</td><td>(a) the measures established over many years by Metromix are consistent with best management practices and have been adopted in the Air Quality Management Plan. These measures</td><td></td></tr>
</table>

Condition No.	Project Approval condition	Verification	Comments	Compliance
	(b) regularly assess air quality monitoring data and relocate, modify, and/or stop operations on site as may be required 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 d to Tables 5-7 above); (d) minimise any visible off-site air pollution; and (e) minimise surface disturbance of the site, other than as permitted under this approval.		have been effective in controlling dust from the quarry activities. Some additional controls (not necessarily consistent with best management practice) have been effective in controlling dust emissions from the Quarry Site to acceptable levels. (b) If monitoring results approach the criteria identified in Project Approval Schedule 3 condition 17, the Quarry Manager or Quarry Supervisor will review: i) the meteorological data for the corresponding period; ii) the locations and duration of activities on site during the corresponding period; and iii) data on activities at the nearby asphalt plant. If Teralba Quarry is determined to be the source of the elevated dust levels, the Quarry Manager will initiate corrective and preventative actions. Metromix will report the event to the EPA in accordance with the Pollution Incident Response Management Plan as soon as practicable after the incident and a report submitted to the DP&I and EPA within 7 days of the exceedence in accordance with Project Approval Schedule 5 condition 7. (c) An automated meteorological station is installed on the Teralba Quarry site. The station retrieves data from the logger and transmits it directly to a computer at the quarry site office. (d) During periods of high wind speeds Teralba Quarry activities capable of generating dust are curtailed in the higher exposed areas. Water is applied to internal roads and blasts are not scheduled or initiated. (e) When areas within the Quarry Site are no longer required for operational purposes, they are rehabilitated in accordance with the Landscape Management Plan.	**Compliant**
	Air Quality Management Plan			
20	The Proponent shall prepare and implement an Air Quality Management Plan for the project to the satisfaction of the Director-General. This plan must: (a) be prepared in consultation with Council, and submitted for approval to the Director-General within 4 months of the date of this approval;	• Letter from DP&I re Comments on Air Quality Management Plan, 15 Aug 2013 • Letter to DP&I re Air Quality Management	The Air Quality Management Plan was prepared to satisfy this Project Approval condition and was approved by DP&I on 10 October 2013: (a) The Air Quality Management Plan was prepared in consultation with Lake Macquarie City Council and a draft copy of the Plan provided to Council	**Compliant**

Condition No.	Project Approval condition	Verification	Comments	Compliance
	(b) describes the measures that would be implemented to ensure: • best management practice is employed; • the air quality impacts of the project are minimised during adverse meteorological conditions and extraordinary events; and • compliance with the relevant conditions of this approval; (c) describes the proposed air quality management system; and (d) includes an air quality monitoring program that: • is capable of evaluating the performance of the project; • includes a protocol for determining any exceedances of the relevant conditions of approval; • adequately supports the air quality management system; and • evaluates and reports on the adequacy of the air quality management system.	Plan, 6 Sep 2013 • Air Quality Management Plan, Sep 2013 • Letter from DP&I re Approval of Air Quality Management Plan, 10 Oct 2013	for review and comment on 26 June 2013. Informal discussions were also held with the EPA, particularly with respect to the proposed air quality monitoring program and locations and type of air quality monitoring. (b) measures implemented are: • consistent with best management practices effective in controlling dust from the quarry activities; • during periods of high wind speeds (typically from the western quadrant): Teralba Quarry activities capable of generating dust are curtailed in the higher exposed areas. • monitoring results are assessed by the Quarry Manager or Quarry Supervisor for compliance with relevant conditions; (c) the Air Quality Management Plan presents the air quality management system for the Teralba Quarry; (d) sections 9, 10 and 11 address air quality monitoring and compliance	
	METEOROLOGICAL MONITORING			
21	For the life of the project, the Proponent shall ensure that there is a suitable meteorological station operating in the vicinity of the site that: • complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline; and • is capable of continuous real-time measurement of temperature lapse rate, in accordance with the NSW Industrial Noise Policy, or as otherwise approved by EPA.	• Environment Protection Licence No. 536, draft Variation dated 7 Feb 2014	The draft Environment Protection Licence No. 0536 condition M5 describes the requirements for a meteorological station to be available on the Teralba Quarry site. A meteorological monitoring station is located in a satisfactory location on the Northern Extension Area and measures wind speed and direction, temperature, rainfall and relative humidity. The station results are relayed to the computer system in the Teralba Quarry office and are continuously available for on site management of activities.	**Compliant**
	SOIL & WATER			
	Note: The Proponent is required to obtain the necessary water licences for the project under the Water Act 1912 and/or the Water Management Act 2000			**Noted**
	Water Supply			
22	The Proponent shall ensure it has sufficient water during all stages of the project, and if necessary, adjust the scale of quarrying operations on site to match its available supply.		Sufficient water supply for the Teralba Quarry activities is available from the Mine Adit of the historic underground coal workings.	**Compliant**
	Surface Water Discharges			
23	The Proponent shall ensure that all surface water discharges from the site comply with the discharge limits in any EPL which regulates water discharges from the site, or with section 120 of the	• Environment Protection Licence No. 536 (draft Variation) 7 Feb 2014	The draft Environment Protection Licence No. 0536 Variation condition P1.2, identifies EPA approved water discharge points 4 and 5 to be monitored	**Noted Compliant**

Condition No.	Project Approval condition	Verification	Comments	Compliance
	POEO Act.		monthly or during discharge (when water is available) for pH and total suspended solids (TSS), points 6 and 7 monitored within 8 hours of commencement of discharge for pH, EC and TSS, and volume discharged from point 7.	
	On-Site Sewage Management			
24	The Proponent shall manage on-site sewage to the satisfaction of Council and the EPA.		Onsite sewage is treated in an onsite sewerage / wastewater treatment plant that has no discharge to the environment.	**Compliant**
	Storage of Chemicals & Petroleum Products			
25	The Proponent shall ensure that all chemicals and/or petroleum products on site are held in appropriately bunded areas with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund, and in accordance with Australian Standard AS1940-2004 -The Storage and Handling of Flammable and Combustible Liquids. The flooring and bund(s) shall be designed in accordance with: • the requirements of relevant Australian Standards; and • DECC's Storing and Handling Liquids: Environmental Protection – Participants Manual.		Petroleum products on site (diesel and oils) are held in appropriately bunded areas with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund (in accordance with AS1940-2004 and the DECC *Storing and Handling Liquids: Environmental Protection Manual*). Waste oil is placed in the bunded waste oil tank and the waste oil collected for recycling by Trans-Pacific.	**Compliant**
	Water Management Plan			
26	The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the Director-General. This plan must be prepared in consultation with Council and NOW by suitably qualified and experienced person/s whose appointment has been approved by the Director-General, and be submitted to the Director-General for approval within 6 months of the date of this approval and prior to any extraction activities within the Northern Extension area. In addition to the standard requirements for management plans (see condition 3 of schedule 5), this plan must include:	• Emails to DP&I re Water Management Plan, 22 Aug 2013 • Water Management Plan, Aug 2013 • Letter from DP&I re Water Management Plan, 16 Jan 2014	The Water Management Plan was prepared in consultation with the Lake Macquarie City Council and the NSW Office of Water (NOW), and submitted to DP&I on 22 August 2013. Comments on the Water Management Plan were received from DP&I on 16 January 2014. The Water Management Plan was being revised to address the DP&I comments at the date of this audit prior to resubmission to DP&I for approval.	**In progress**
26	(a) Site Water Balance that: • includes details of: o sources and security of water supply, including contingency planning; o water use on site; o water management on site; o reporting procedures, including comparisons of the site water balance each calendar year; and • describes the measures that would be implemented to minimise clean water use on site;	• Water Management Plan, section 7.4, Aug 2013 • Specialist Consultant Studies Compendium for the Teralba Quarry Extensions EA, Jun 2012 Part 3 –Surface Water Assessment –BMT-WBM Pty Ltd (2011) • NOW Licence No. 20BL173206,	(a) The site water balance was prepared as part of the Environmental Assessment for the project: ○ Water Management Plan section 7.3.1 addresses Water Supply - potable water is sourced directly from the local water mains. Non-potable water is extracted under NOW Licence No. 20BL173206 from the Mine Adit Dam A; ○ Flow monitoring (from the installed water flow meters) and water quality data collected is reported as part of the EPL Annual Return and Annual Review under the Project Approval; ○ Water is recirculated throughout the operation of the processing plant, with waste water or slurry pumped to the silt cells for settlement.	**Compliant** **(Approval as part of the Water Management Plan is in Progress)**

Condition No.	Project Approval condition	Verification	Comments	Compliance
26	(b) Surface Water Management Plan, that includes: • detailed baseline data on surface water flows and quality in the watercourses that could be affected by the project; • a detailed description of the surface water management system on site, including the: o clean water diversion systems; o erosion and sediment controls; and o water storages; • design objectives and performance criteria for proposed: o erosion and sediment control structures; o water storages; and o control of water pollution from rehabilitated areas of the site; • performance criteria, including trigger levels for investigating any potentially adverse impacts, for surface water quality of local watercourses and Lake Macquarie; • a program to monitor: o the effectiveness of the water management system; o surface water flows and quality in local watercourses and Lake Macquarie; and o ecosystem health of local watercourses and Lake Macquarie; • a plan to respond to any exceedances of the performance criteria, and mitigate and/or offset any adverse surface water impacts of the project; and • a detailed review the dirty water management system to: o determine whether the capacity, integrity, retention time and management of the system are sufficient to ensure that water discharged from the site meets the performance criteria and propose any upgrades necessary to meet these criteria; o assess appropriate options to improve storage and retention times in accordance with The Blue Book - Managing Urban Stormwater (MUS): Soils and Construction (Landcom); and	Water Management Plan, section 7.3, Aug 2013	(b) Surface Water Management has been prepared as part of the Water Management Plan section 7: • Section 7.1.3 addresses Existing Surface Water Quality • Section 7.1 addresses Site Water Management and section 8 addresses clean water diversion and erosion and sediment controls • Section 8 addresses design objectives and performance criteria for site water management; • Section 9.2 addresses performance criteria, including trigger levels performance criteria, including trigger levels; • Section 9.3 addresses monitoring locations and frequency; • Section 11 outlines corrective and preventative actions to respond to any exceedances of the performance criteria; • Section 10 provides a review of the dirty water management system, and section 8 outlines options to improve storage and retention times in accordance with The Blue Book	**Compliant** **(Approval as part of the Water Management Plan is in Progress)**
26	(c) Groundwater Management Plan, that includes: • detailed baseline data on groundwater yield and quality in the area, that could be affected by the project; • groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts; • a program to monitor: ○ surface water inflows into the groundwater system beneath the site; ○ the impacts of the project on: - the local coal seam aquifer; - any groundwater bores on privately-owned land that could be affected by the project; and - groundwater dependent ecosystems; and • seepage/leachate from water storages or backfilled voids (including historical coal workings) on site; and	Water Management Plan, section 7.2, Aug 2013	(c) Groundwater Management has been prepared in Water Management Plan section 7.2: • Sections 7.2.1 to 7.2.3 outline baseline groundwater yield and quality in the area of the Teralba Quarry; • Section 9.3 outlines the monitoring program for surface water inflows, local seam aquifers, groundwater bores and groundwater dependent ecosystems; • Section 11 outlines corrective and preventative actions to respond to any exceedances of the groundwater assessment criteria;	**Compliant** **(Approval as part of the Water Management Plan is in Progress)**

Condition No.	Project Approval condition	Verification	Comments	Compliance
	• a plan to respond to any exceedances of the groundwater assessment criteria; *Note: The Director-General may require the Proponent to implement upgrades and other changes identified under paragraph (b), in accordance with condition 4 of schedule 2.*			
	VISUAL			
	Protection of Ridgelines			
27	The Proponent shall ensure that any clearing of visually prominent ridgeline vegetation is done in a progressive manner, so as to provide for a maximum of 6 months of future quarrying operations.		The Teralba Quarry plan for the clearance of ridgeline vegetation is cognisant of the visual impact associated with the ridgelines and progressive minimal clearing is being practised in relation to the extension works to reduce potential impact.	**Compliant Ongoing**
28	The Proponent shall ensure that the: (a) eastern facing quarry benches of the Southern Extension are vegetated with native endemic understory species and trees as soon as practicable following the completion of extraction of those benches; and (b) revegetation of the quarry benches is managed to ensure that a tree canopy is regenerated, as soon as practicable, to be consistent with and visually integrated into the surrounding tree canopy. to the satisfaction of the Director-General.		(a) Works on the eastern faces of the Southern Extension Area commenced in December 2013 and extraction of resource had commenced on the lower sections of the quarry face at the time of the audit. (b) Regeneration of native endemic understorey and tree canopy will commence when the recovery of resource is complete from the eastern face areas.	**In progress**
	Operating Conditions			
29	The Proponent shall (a) implement all reasonable and feasible measures to minimise the visual impacts and any offsite lighting impacts of the project; and (b) maintain and improve the effectiveness of the vegetated plantings on the quarry benches, over the life of the project.		(a) Visual impacts of the quarry operations have been minimised for the Southern Extension Area quarry works and there are no offsite lighting impacts from the current works; (b) Revegetation of the completed areas of the Teralba Quarry appears consistent with the surrounding tree canopy.	**Compliant Ongoing**
	Advertising Signage			
30	The Proponent shall not erect or display any advertising structure(s) or signs on the site without the written approval of the Director-General. *Note: This condition does not require approval for any business identification, traffic management, and/or safety or environmental signs.*		Signs erected at the entrance to the Teralba Quarry site are only related to the company identification, safety and environment, and traffic signs.	**Compliant**
	TRANSPORT			
	Intersection Investigation and Wheel Wash			
31	Within 6 months of the date of this approval the Proponent shall: (a) commission a suitably qualified and experienced person endorsed by the Director-General to undertake a road safety audit	• Project Approval 10_0183, granted 22 Feb 2013	(a) GTA Consultants (Ken Hollyoak - suitably qualified and experienced traffic consultant) undertook a road safety audit for the intersection	**Compliant**

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Condition No.	Project Approval condition	Verification	Comments	Compliance
	report of the intersection of York Street and Anzac Parade in consultation with Council; (b) submit the report and any recommendations to the Director-General for approval; and (c) implement any recommendations of the road safety audit to upgrade the intersection of York Street and Anzac Parade to the satisfaction of Council.	• Guide to Road Safety Part 6:Road Safety Audit, Austroads, 2009 • Guidelines for Road Safety Audit Practices. RMS, 2011 • Letter to DP&I re Road Safety Audit Report, 14 Aug 2013	of York Street and Anzac Parade Teralba in consultation with Lake Macquarie City Council; (b) The Road Safety Audit Report and consequent letters were submitted to the Director-General; (c) The road safety audit identified primary issues that would be addressed by Council as part of their ongoing maintenance and cannot be reasonably related to the operations at Metromix.	
32	The Proponent shall install truck wheel wash facilities within 6 months of the date of this approval at all quarry exits and following such installation, must ensure that all trucks have their tyres and vehicles cleaned of mud, dirt and dust prior to exiting the site, so as to avoid tracking dirt onto public roads, to the satisfaction of the Director-General.		Wheel wash facilities were installed at the quarry exits to ensure truck tyres are cleaned of mud, dirt and dust prior to exiting the site, to avoid tracking dirt onto public roads	Compliant
	Operating Conditions			
33	The Proponent shall construct the tunnel and conveyor under Rhondda Road to the satisfaction of Council.		The commencement of quarrying of the Northern Extension, that will require the construction of a tunnel and conveyor under Rhondda Road, will not occur until 2012-2024.	**Not yet applicable**
34	Within 6 months of the date of this approval, the Proponent shall cease transporting quarry material by truck between the quarry pits.		Transport of quarry materials between the Northern and Southern Extension pits ceased on 22 August 2013.	Compliant
35	The Proponent may only transport quarry products from the site on the designated Haulage Routes (see Appendix 4), except in circumstances where the final destination of the quarry products can only be accessed by other roads		Transport of products from the Teralba Quarry site only occurs on the designated Haulage Routes identified in the Project Approval in Appendix 4 and the Traffic Management Plan.	Compliant
36	The Proponent shall ensure that all heavy vehicles: (a) do not exceed an on-site speed limit of 30 km per hour; (b) exiting the site to the east via the bottom gate (ie to Railway Street) during the Day Shoulder period do not exceed the on-site speed limit and minimise noise as far as reasonable between Railway Street and the end of the existing engineering works; and (c) entering or leaving the site have their loads covered.		(a) On-site is limited to 30kph as noted by signage; (b) Exit speed to Railway Street is limited to 30kph; (c) all trucks leaving the Teralba Quarry site were observed to have their loads covered.	Compliant
37	During the AM peak period and PM peak period, the Proponent shall implement all reasonable and feasible measures to minimise project-related traffic delays and congestion at the intersection of Toronto and Five Islands Roads and along York Street, to the satisfaction of the Director-General.	• Traffic Management Plan, Oct 2013 • Teralba Quarry Truck Movements	Hourly truck rates are managed to minimise project-related traffic delays and congestion at the intersection of Toronto and Five Islands Roads and along York Street.	Compliant
38	Only trucks owned by the Proponent, its shareholders or approved contractors and fitted with airbag suspension may transport quarry		All trucks owned by Metromix, and its approved contractors and fitted with airbag suspension.	Compliant

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	products from the site between 6 pm and 6 am.			
	Maintenance			
39	The Proponent shall regularly maintain the pavement of the on-site road that connects to Railway Street to minimise dust generation and potholes, to the satisfaction of the Director-General.		The pavement of the on-site road (after the wheel wash) that connects to Railway Street was observed to be well maintained.	**Compliant Ongoing**
	Monitoring of Product Transport			
40	The Proponent shall: (a) keep accurate records of: • the amount of quarry products transported from the site (monthly and annually); and • all laden truck movements from the site (hourly, daily, weekly, monthly and annually); and (b) publish these records on its website on a quarterly basis.	• Traffic Management Plan, Oct 2013 • Teralba Quarry Truck Movements • www.metromix.com.au	(a) Quarry product records are maintained on Monthly Transport Tonnages for Council charges (tonnage is not reported on the website as it is considered confidential information) but is available to the CCC and in Annual Review; (b) All laden truck movements from the site are recorded in accordance with this condition; (c) Truck movements recorded on placed on the Metromix website.	**Compliant**
	Road Signage			
41	Within 6 months of the date of this approval the Proponent shall install flashing lights within Northville Drive for the 40 km school zones outside of Barnsley and Edgeworth Heights Public Schools, to the satisfaction of RMS.	• Letter from DP&I re Project Approval Schedule 3 condition 41, 15 Aug 2013	RMS did not support the installation of flashing lights at school zones by parties other than RMS. DP&I accepted that Metromix did not have to implement this condition.	**Not applicable**
42	Prior to carrying out quarrying operations under this approval, the Proponent shall install "Trucks entering" warning signs 200 metres either side of the quarry entrances on public roads.		"Trucks entering" warning signs have been erected 200 metres either side of the quarry entrances on public roads.	**Compliant**
	Parking			
43	The Proponent shall provide sufficient parking on-site for all project-related traffic in accordance with Council's parking codes and in consultation with Council.		No Council Parking Code was available for the Teralba Quarry site. Metromix have adequate parking on site for all project-related traffic.	**Compliant**
	Transport Management Plan			
44	The Proponent shall prepare and implement a Transport Management Plan for the project to the Director-General. This plan must: (a) be prepared by a suitably qualified traffic consultant in consultation with the RMS and Council, and submitted to the Director-General for approval within 4 months of the date of this approval; (b) include a drivers' code of conduct for the project;	• Transport Management Plan, Oct 2013	A Traffic Management Plan was prepared in June 2013 to satisfy this condition and was approved by DP&I on 10 October 2013: (a) The Traffic Management Plan was prepared by GTA Consultants in conjunction with R W Corkery & Co, in consultation with the RMS and Lake Macquarie City Council; (b) Traffic Management Plan Appendix 1 provides	**Compliant**

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	(c) describe the measures that would be implemented to ensure: • drivers are aware of potential safety issues along the haulage routes in particular near schools; • drivers of project-related vehicles comply with the drivers' code of conduct; • compliance with the relevant conditions of this approval; and (d) include a program to monitor the effectiveness of the implementation of these measures.		(c) the Drivers Code of Conduct: Traffic Management Plan section 6.2 describes Competence Training and Awareness that includes site traffic rules, safe site delivery, Drivers Code of Conduct, maximum hourly despatch rates and operation and maintenance of wheel washes. (d) Traffic Management Plan section 8 describes Performance and Monitoring of the truck and transport management plan requirements.	
	BUSHFIRE MANAGEMENT			
45	The Proponent shall: a) ensure that the project is suitably equipped to respond to any fires on site; and b) assist the Rural Fire Service, emergency services and National Parks and Wildlife Service as much as possible if there is a fire in the surrounding area.	• Bushfire Management Plan, Feb 2014	A Bushfire Management Plan for the Teralba Quarry was being prepared at the date of the audit to address the requirements of this condition	**In progress**
	WASTE			
46	Prior to importing any Virgin Excavated Natural Material or excavated natural material to the site, the Proponent must obtain a 'resource recovery exemption' under the POEO Act and provide evidence of this approval to the Department.	• Waste Management Plan, Oct 2013	A 'Resource recovery exemption' under the *Protection of the Environment Operations Act 1997* will be obtained when VENM/ ENM is required for the site.	**Not activated**
47	The Proponent shall: (a) minimise the waste generated by the project; and (b) ensure that the waste generated by the project is appropriately stored, handled, and disposed of, to the satisfaction of the Director-General.	• Waste Management Plan, Oct 2013	The waste generated by the project is appropriately stored and handled on site. All waste is segregated into separate bins, containers or tanks and the wastes are collected for recycling/disposal by Trans-Pacific Waste contractors, and Sell and Parker Metal Recycling Services.	**Compliant**
48	The Proponent shall prepare and implement a Waste Management Plan for the project to the satisfaction of the Director-General. This plan must: (a) be prepared in consultation with DRE and Council, and submitted to the Director-General for approval prior within 4 months of the date of this approval; (b) identify the various waste streams of the project; (c) estimate the volumes of waste material that would be generated by the project, including recycled concrete brought on-site; (d) describe and justify the proposed strategy for disposing of this waste material, including recycled concrete brought on-site; (e) include a program to monitor the effectiveness of these measures.	• Waste Management Plan, Oct 2013	The Waste Management Plan was approved by DP&I on 10 Oct 2013: (a) DRE and Council were consulted during preparation of the Waste Management Plan; (b) Waste streams from the Teralba Quarry are identified in Table 7.1 of the Waste Management Plan; (c) Section 8 of the Waste Management Plan discusses estimated waste volumes that would be generated by the project; (d) Section 9 of the Waste Management Plan describes the waste control measures and management strategies; (e) Section 10 describes monitoring and evaluation of compliance.	**Compliant**

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Condition No.	Project Approval condition	Verification	Comments	Compliance
	ABORIGINAL HERITAGE			
	Heritage Management Plan			
49	The Proponent shall prepare and implement a Heritage Management Plan for the project to the satisfaction of the Director-General. This plan must: (a) be prepared in consultation with Aboriginal stakeholders; (b) be submitted to the Director-General for approval prior to carrying out any development within the Northern Extension area or within 6 months of the date of this approval; (c) describe the measures that would be implemented for: • monitoring all new surface disturbance on site for unidentified Aboriginal objects; managing the discovery of any human remains or previously unidentified Aboriginal objects on site; and • ensuring ongoing consultation with Aboriginal stakeholders in the conservation and management of any Aboriginal cultural heritage values on site.	• Heritage Management Plan, Aug 2013 • Letter from DP&I re Comments on the Aboriginal Heritage Management Plan, 16 January 2014	An Aboriginal Heritage Management Plan was prepared in June 2013 to satisfy the requirements of this condition. The plan was submitted to DP&I in August 2013. (a) Letters were sent by registered mail to Aboriginal stakeholders on 15 May 2013 requesting review of the Plan. No responses were received; (b) The draft Aboriginal Heritage Management Plan was prepared and submitted to DP&I within 6 months of the date of this approval. (It is noted that no development of the Northern Extension had occurred at the date of this audit). (c) Comments on the Aboriginal Heritage Management Plan were received from DP&I on 16 January 2014. *"The Heritage Management Plan does not adequately address condition 49 (c) of schedule 3 regarding the measures that would be implemented for monitoring and managing unidentified Aboriginal objects and ensuring ongoing consultation with Aboriginal stakeholders.* *A revised Heritage Management Plan must be submitted that includes:* • *methods and measures for pre-clearance surveys conducted by appropriately qualified individual/s in high risk areas (i.e. creek/drainage lines within vegetated areas that have not been previously surveyed);* • *the invitation of local Aboriginal representatives on-site during clearance works to assist in the identification, management and handling of Aboriginal objects;* • *measures to ensure ongoing consultation with and involvement by the local Aboriginal community; and* • *measures to ensure any identified Aboriginal objects are appropriately managed and handled in accordance with the wishes of local registered Aboriginal stakeholders."* Metromix had not resubmitted a revised Aboriginal Heritage Management Plan addressing the to the comments from DP&I at the date of this audit.	**Compliant** **In progress**

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	LANDSCAPE			
	Fauna Habitat			
50	The Proponent shall install 20 nest boxes for microbats, 20 nest boxes for Little Lorikeets and 30 nest boxes for Sugar Gliders. These boxes must be monitored and maintained regularly over the life of the project, and re-located or replaced if not used by targeted fauna for a period of 12 months.	• Environmental Assessment Specialist Consultant Studies Compendium Volume 1 Part 5	***Refer to SoC Terrestrial Flora and Fauna 8.7*** Prior to commencement of quarrying activities in the Northern Extension where hollow bearing trees have been identified, nesting boxes will be installed for fauna species potentially displaced following clearing activities (e.g. 20 boxes for microbats, 20 boxes for Little Lorikeets and 30 boxes for Sugar Gliders).	**Not yet activated**
51	The Proponent shall, wherever practicable, avoid clearing hollow-bearing trees. If clearing a hollow bearing tree cannot be avoided, then its removal must be offset with an additional and comparable habitat structure within the site.		The Stripping Plan Procedure was implemented before any clearance occurred in the Southern Extension Area Stage 1A. Clearing conducted for the commencement of the Stage 1A involved the protection of a hollow bearing tree near the boundary of the quarrying works.	**Compliant Ongoing**
	Biodiversity Offset Strategy			
52	The Proponent shall implement the Biodiversity Offset Strategy, as described in the EA, summarised in Table 8 and shown conceptually in the figure in Appendix 5, to the satisfaction of the Director-General. *Table8: Biodiversity Offset Strategy* **Area** / **Offset Type** / **Minimum Size (ha)** Offset Area / Existing vegetation to be enhanced / 142.6ha Total / 142.6ha	• Environmental Assessment, section 2.17 • Project Approval Appendix 5	The development and implementation of the Biodiversity Offset Strategy will be provided separately in the *BioBanking Management Plan* for the Teralba Quarry to be prepared after approval of the Landscape Management Plan by OEH.	**Not yet activated**
	Long Term Security of Offsets			
53	By the end of June 2014, unless the Director-General agrees otherwise, the Proponent shall enter into a conservation agreement pursuant to section 69B of the National Parks and Wildlife Act 1974 for the Offset Area, which records the obligations assumed by the Proponent under the conditions of this approval in relation to this area, and shall register this agreement pursuant to section 69F of the National Parks and Wildlife Act 1974. The conservation agreement must remain in force in perpetuity. If OEH is not prepared to enter into a conservation agreement, then to satisfy this condition, the Proponent may propose another conservation measure to secure the offset for approval by the Director-General.		The requirements of this condition are due by the end of June 2014.	**In progress**
	Relocated Power-lines			
54	The Proponent shall ensure that any relocation of existing power-lines on-site does not cause greater than minor environmental consequences within the Offset Area.		Relocation of power lines is planned to occur in 2015 as the development of the Southern section progresses.	**Noted**

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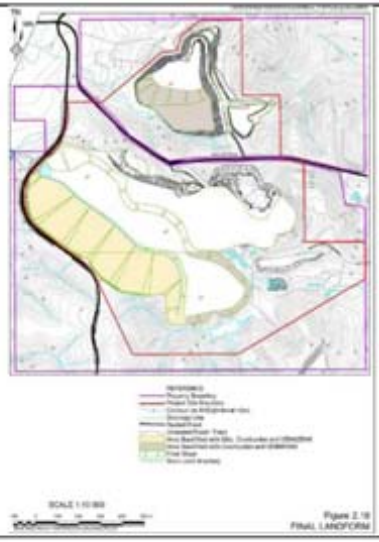
	Rehabilitation Objectives			
55	The Proponent shall rehabilitate the site to the satisfaction of the Director-General. This rehabilitation must be generally consistent with the proposed rehabilitation strategy in the EA and Appendix 6, and comply with the objectives in Table 9. **Feature** / **Objective** Site (as a whole): Safe, stable & non-polluting. Surface Infrastructure: To be decommissioned and removed, unless the D-G agrees otherwise. Benched Quarry Walls: Landscaped and revegetated utilising native tree and understorey species, ensuring that the tree canopy is restored and integrated with the surrounding canopy to minimise visual impacts Quarry Pit Floor and Silt Ponds: Landscaped and revegetated utilising native flora species and felled trees from clearing. Revegetation not required for existing and proposed industrial areas. Other Land Affected by the Project: Restore ecosystem function, including maintaining or establishing self-sustaining eco-systems comprised of: • native endemic species: and • a landform consistent with Figure 8 (Appendix 6) and the surrounding environment.	Environmental Assessment Project Approval - Appendix 6		**Noted**
	Progressive Rehabilitation			
56	The Proponent shall rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim rehabilitation strategies shall be employed when areas prone to dust generation cannot yet be permanently rehabilitated.		The Teralba Quarry disturbed areas are being progressively rehabilitated as is demonstrated by the restored areas to the southeast of the active work areas near the underground mine adit.	**Compliant Ongoing**
	Landscape Management Plan			
57	The Proponent shall prepare and implement a Landscape Management Plan for the project to the satisfaction of the Director-General. This plan must: (a) be prepared in consultation with DRE, DPI and Council; (b) be submitted to the Director-General for approval prior within 12 months of the date of this approval; (c) describe how the implementation of the Biodiversity Offset	Landscape Management Plan (draft) dated January 2014	A Landscape Management Plan (draft) dated January 2014 has been prepared for submission to the DP&I: (a) Following discussions held with DP&I in July 2013 consultation with Lake Macquarie City Council, Department of Primary Industries Catchment and Lands Division and Hunter-	**Compliant Ongoing**

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	Strategy would be integrated with the overall rehabilitation of the site; (d) describe the short, medium and long term measures that would be implemented to: • manage remnant vegetation and habitat on site; • implement the Biodiversity Offset Strategy; and • ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this approval; (e) include detailed performance and completion criteria for evaluating the performance of the Biodiversity Offset Strategy and the rehabilitation of the site, including triggering remedial action (if necessary); (f) include a detailed description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for: • ensuring compliance with the rehabilitation objectives and progressive rehabilitation obligations in this approval; • enhancing the quality of remnant vegetation and fauna habitat; • restoring native endemic vegetation and fauna habitat within the biodiversity offset areas and rehabilitation area; • maximising the salvage of environmental resources within the approved disturbance area – including tree hollows, vegetative and soil resources – for beneficial reuse in the enhancement of the biodiversity areas or rehabilitation area; • collecting and propagating seed; • ensuring minimal environmental consequences for the local *Tetratheca juncea* population; • minimising the impacts on native fauna on site, including undertaking appropriate pre-clearance surveys; • controlling weeds and feral pests; • controlling erosion; • controlling access; and • bushfire management; g) include a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria; h) identify the potential risks to successful implementation of the Biodiversity Offset Strategy and rehabilitation of the site, and include a description of the contingency measures that would be implemented to mitigate against these risks; and i) include details of who would be responsible for monitoring, reviewing, and implementing the plan.		Central Rivers Catchment Management Authority, Division of Resources and Energy, and the Office of Environment and Heritage has occurred for development of the Landscape Management Plan; (b) A Landscape Management Plan (draft) has been prepared for submission to the DP&I by 22 February 2014; (c) Landscape Management Plan section 10 addresses how the implementation of the Biodiversity Offset Strategy will be integrated with the overall rehabilitation of the site; (d) Landscape Management Plan section 12 describes the short, medium and long term measures for management of remnant vegetation and habitat on site, implementation of the Biodiversity Offset Strategy, and compliance with the rehabilitation objectives and progressive rehabilitation obligations; (e) Landscape Management Plan section 16 addresses Rehabilitation Performance and Completion Criteria; (f) Landscape Management Plan section 14 describes landscape management measures and procedures to be implemented over 2014 to 2017 to comply with the requirements of the Project Approval requirements; (g) Landscape Management Plan section 15, and Monitoring and Evaluation and section 17 address Evaluation of Compliance; (h) Landscape Management Plan section 11 addresses Rehabilitation and Biodiversity Offset Strategy Risks; (i) Landscape Management Plan section 6 includes details of personnel roles and responsibilities for monitoring, reviewing, and implementing the plan.	
	Conservation & Rehabilitation Bond			
58	Within 6 months of the approval of the Landscape Management		The Landscape Management Plan was planned for	Not yet

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	Plan, the Proponent shall lodge a Conservation and Rehabilitation Bond with the Department to ensure that the Biodiversity Offset Strategy and the rehabilitation of the site is implemented in accordance with the performance and completion criteria set out in the Landscape Management Plan. The sum of the bond shall be determined by: (a) calculating the cost of implementing the Biodiversity Offset Strategy over the next 3 years; (b) calculating the cost of rehabilitating the site, taking into account the likely surface disturbance over the next 3 years of quarrying operations; and (c) employing a suitably qualified quantity surveyor or other expert to verify the calculated costs, to the satisfaction of the Director-General. *Notes:* • *If capital and other expenditure required by the Landscape Management Plan is largely complete, the Director-General may waive the requirement for lodgement of a bond in respect of the remaining expenditure.* • *If the Biodiversity Offset Strategy and rehabilitation of the site area are completed to the satisfaction of the Director-General, then the Director-General will release the bond. If the Biodiversity Offset Strategy and rehabilitation of the site are not completed to the satisfaction of the Director-General, then the Director-General will call in all or part of the bond, and arrange for the completion of the relevant works.*		submission to DP&I in February 2014 and the conservation and rehabilitation bond will be due for lodgement to the DP&I within 6 months of approval of the Landscape Management Plan.	**activated**
59	Within 3 months of each Independent Environmental Audit (see condition 9 of schedule 5), the Proponent shall review, and if necessary revise, the sum of the Conservation and Rehabilitation Bond to the satisfaction of the Director-General. This review must consider the: (a) effects of inflation; (b) likely cost of implementing the Biodiversity Offset Strategy and rehabilitating the site (taking into account the likely surface disturbance over the next 3 years of the project); and (c) performance of the implementation of the Biodiversity Offset Strategy and rehabilitation of the site to date.			**Noted**
	SCHEDULE 4 ADDITIONAL PROCEDURES			
	NOTIFICATION OF LANDOWNERS			
1	As soon as practicable after obtaining monitoring results showing an: (a) exceedance of any relevant criteria in schedule 3, the Proponent shall notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the project is again complying with the relevant criteria; and			**Not activated**

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	(b) an exceedance of the relevant air quality criteria in schedule 3, the proponent shall send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land.			
	INDEPENDENT REVIEW			
2	If an owner of privately-owned land considers the project to be exceeding the relevant 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. If the Director-General is satisfied that an independent review is warranted, then within 2 months of the Director-General's decision the Proponent shall: (a) commission a suitably qualified, experienced and independent expert, whose appointment has been approved by the Director-General, to: • consult with the landowner to determine his/her concerns; • conduct monitoring to determine whether the project is complying with the relevant criteria in schedule 3; and • if the project is not complying with these criteria, then identify the measures that could be implemented to ensure compliance with the relevant criteria; and (b) give the Director-General and landowner a copy of the independent review.			**Not activated**
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. If the independent review determines that the project is not complying with the relevant criteria in schedule 3, then the Proponent shall: (a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent expert, and conduct further monitoring until the project complies with the relevant criteria; or (b) secure a written agreement with the landowner to allow exceedances of the relevant criteria, to the satisfaction of the Director-General.			**Noted**
	SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING			
	ENVIRONMENTAL MANAGEMENT			
	Environmental Management Strategy			
1	The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must:	• Environmental Management Strategy. Aug 2013	An Environmental Management Strategy was prepared to satisfy Project Approval Schedule 5 condition 1 and submitted to DP&I on 22 August	**Compliant**

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	(a) be submitted to the Director-General for approval with 6 months of the date of this approval; (b) provide the strategic framework for environmental management of the project; (c) identify the statutory approvals that apply to the project; (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project; (e) describe the procedures that would be implemented to: • keep the local community and relevant agencies informed about the operation and environmental performance of the project; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise during the course of the project; • respond to any non-compliance; and • respond to emergencies; and (f) include: • copies of any strategies, plans and programs approved under the conditions of this approval; and • a clear plan depicting all the monitoring required to be carried out under the conditions of this approval.		2013. DP&I approved the Environmental Management Strategy on 16 January 2014: (a) the Environmental Management Strategy was submitted to DP&I on 22 August 2013; (b) EMS section 2 addresses the Strategic Framework for environmental management; (c) EMS section 3 identifies Legal and Other Requirements for the Teralba Quarry; (d) EMS section 14 addresses Roles and Responsibilities of all key personnel involved in the environmental management of the Teralba Quarry; (e) the EMS describes procedures for: • section 11 Stakeholder and Community Consultation and section 13 Publication of Information; • section 9 Complaints Handling and Dispute Resolution; • section 7 Corrective and Preventative Actions; • section 10 Emergency Response and ; (f) section 3.3 Environmental Management Plans, and section 5 Monitoring.	
	Adaptive Management			
2	The Proponent shall assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this approval and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation. Where any exceedance of these criteria and/or performance measures has occurred, the Proponent shall, at the earliest opportunity: (a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur; (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and (c) implement remediation measures as directed by the Director-General, to the satisfaction of the Director-General.			**Noted**
	Management Plan Requirements			
3	The Proponent shall ensure that the Management Plans required under this approval are prepared in accordance with any relevant guidelines, and include: (a) detailed baseline data;	• Project Approval references: Schedule 3 condition 20 - Air Quality Management Plan	The Management Plans required under this Project Approval have been prepared generally in accordance with the guidelines outlined in Project Approval Schedule 5 condition 3. The requirements	**Compliant**

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	(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 would 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; (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 Director-General may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.*	• Schedule 3 condition 16 - Blast Management Plan • Schedule 3 condition 49 - Heritage Management Plan • Schedule 3 condition 57 - Landscape Management Plan (draft) • Schedule 3 condition 44 -Transport Management Plan • Schedule 3 condition 48 - Waste Management Plan • Schedule 3 condition 26 - Water Management Plan	are addressed under the following section headings in each Plan: (a) baseline data - Existing Environment and Potential Impacts and Environmental Assessment Appendices; (b) relevant statutory requirements - Legal and Other Requirements; relevant limits or performance measures/criteria and specific performance indicators – Existing Environment and Potential Impacts; (c) description of the management measures to be implemented – Control Measures; (d) program to monitor and report on impacts and environmental performance – Monitoring Program; and effectiveness of any management measures – Evaluation of Compliance ; (e) contingency plan to manage unpredicted impacts and their consequences – Corrective and Preventative Actions; (f) program to investigate and implement ways to improve the environmental performance (g) a protocol for managing and reporting any: • incidents – Incident Reporting; • complaints – Complaints Handling and Response; • non-compliances with statutory requirements – Evaluation of Compliance; • exceedances of the impact assessment criteria and/or performance criteria - Evaluation of Compliance and Corrective and Preventative Measures; (h) a protocol for periodic review of the plan – Plan Review.	
	Annual Review			
4	By the end of March each year, the Proponent shall review the environmental performance of the project to the satisfaction of the Director-General. This review must: (a) describe the development (including rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year; (b) include a comprehensive review of the monitoring results and complaints records of the project over the previous calendar year, which includes a comparison of these results against: • the relevant statutory requirements, limits or performance measures/criteria; • the monitoring results of previous years; and • the relevant predictions in the EA;		The first Annual Review for the Teralba Quarry Extensions is due in March 2014. The document was being prepared at the time of this audit.	**Noted**

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	(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance; (d) identify any trends in the monitoring data over the life of the project; (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and (f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the project.			
	Revision of Strategies, Plans & Programs			
5	Within 3 months of the submission of an: (a) annual review under condition 4 above; (b) incident report under condition 7 below; (c) audit report under condition 9 below; and (d) any modifications to this approval, the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Director-General. *Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.*			**Noted**
	Community Consultative Committee			
6	The Proponent shall establish and operate a Community Consultative Committee (CCC) for the project to the satisfaction of the Director-General. This CCC must be operated in general accordance with the Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007, or its latest version), and be operating within four months of the date of this approval. *Notes:* • *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval.* • *In accordance with the guideline, the Committee should comprise an independent chair and appropriate representation from the Proponent, Council, recognised environmental groups and the local community.*	• CCC Consultation Records, April to July 2013 • Email from DP&I re Approval of Chairperson for the CCC, 13 Aug 2013 • Letter from DP&I re CCC Commencement, 15 Aug 2013 • CCC Meeting Minutes 2 Sep 2013 • CCC Meeting Minutes, 27 Nov 2013	The establishment of the Community Consultative Committee (CCC) occurred later than four months after the date of this approval. Metromix experienced difficulties in attracting community representation onto the committee as evidenced from the consultation records. The first meeting of the CCC was held on 2 September 2013. Attendees were: ***Chairperson –*** Margaret McDonald-Hill ***Community Members –*** Richard Metcalf and Susan Gleeson ***Lake Macquarie City Council –*** Symon Warpole ***Metromix –*** William Sanderson, Robert McCabe and Debbie Charman	**Not Compliant (date for CCC establishment)** **Compliant**
	REPORTING			
	Incident Reporting			
7	The Proponent shall notify, at the earliest opportunity, the Director-General and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment.		No reportable incidents were identified between February 2013 and February 2014.	**Not activated**

Condition No.	Project Approval condition	Verification	Comments	Compliance
	For any other incident associated with the project, the Proponent shall notify the Director-General and any other relevant agencies as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.			
	Regular Reporting			
8	The Proponent shall provide regular reporting on 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.	www.metromix.com.au/	Refer to Project Approval Schedule 5 condition 11.	**Compliant**
	INDEPENDENT ENVIRONMENTAL AUDIT			
9	Within a year of the commencement of development on site under this approval, and every 3 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: (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General; (b) include consultation with the relevant agencies; (c) assess the environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant EPL and/or Water License (including any assessment, plan or program required under these approvals); (d) review the adequacy of any approved strategy, plan or program required under the these approvals; and (e) recommend measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals. *Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Director-General.*	Letter from DP&I re Approval of Independent Auditor, 14 Jan 2014	This Independent Environmental Audit fulfils the requirements of this condition for the conduct of an audit within 1 year of commencement of development. (a) The Independent Environmental Audit has been conducted by Trevor Brown endorsed by the Director-General on 14 January 2014. (b) Consultation occurred with relevant agencies (RMS, Lake Macquarie City Council, DRE and NOW); (c) environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant EPL and/or Water License addressed in section 4 and Attachments to this audit; (d) review the adequacy of any approved strategy, plan or program required under the these approvals addressed in section 4 of this report; (e) any recommended measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals are provided in section 5 of this audit report.	**Compliant**
10	Within 3 months of commissioning this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, together with its response to any recommendations contained in the audit report.			**Noted**
	ACCESS TO INFORMATION			
11	Within 4 months of the date of this approval, the Proponent shall: (a) make the following information publicly available on its website: • the EA; • current statutory approvals for the project; • approved strategies, plans or programs; • a summary of the monitoring results of the project, which have	www.metromix.com.au/	The following information publicly available on its website: • Environmental Protection License 536 • Teralba Quarry Project Approval 10_0183 • Response To EA Submissions • Environmental Assessment, Nov 2011	**Compliant Ongoing**

Condition No.	Project Approval condition	Verification	Comments	Compliance
	been reported in accordance with the various plans and programs approved under the conditions of this approval; • a complaints register, updated on a quarterly basis; • minutes of CCC meetings; • copies of any annual reviews (over the last 5 years); • any independent environmental audit, and the Proponent's response to the recommendations in any audit; and • any other matter required by the Director-General; and (b) keep this information up-to-date, to the satisfaction of the Director-General.		• Specialist Consultant Studies Compendium Volume 1 and Volume 2, Nov 2011 • Community Consultative Committee (CCC) Minutes • Environmental Management Strategy • Air Quality • Blast Management • Heritage Management Plan • Noise Management • Transport • Waste Management • Water Management • Community Complaints • Non Compliances • Monitoring results	

Independent Environmental Audit – Teralba Quarry February 2014

Attachment 2 Statements of Commitment

Attachment 2 Statements of Commitment A

Attachment 2 - Statements of Commitment

(Environmental Assessment section 6 - Statements of Commitment, November 2011)

SoC No.	Action	Timing	Verification	Comment	Compliance
1	**Activities and Operations**				
All approved activities are undertaken in the area(s) nominated on the approved plans and figures (unless moved slightly to avoid individual trees).					
	Clearly mark the boundary of each area of activity, (i.e. the boundary of the Southern and Northern Extensions).	Prior to the commencement of quarrying operations.	• Boundary Survey Plan, Southern Extension, Moutrie Survey, Jun 2013 • Compendium of Documents for DP&I, Sep 2013	***Refer to Project Approval Schedule 3 condition 1*** The boundaries of the approved limits of the Teralba Quarry lease activities have been marked with coloured poles for the various areas: • White poles - Stage 1A, • Yellow poles – quarry extraction limits • Blue poles - Council Pugmill Area • Green poles – Downer Signage is to be placed on the posts to specifically identify each of the active areas of works within the Teralba Quarry lease boundaries.	**Compliant**
2	**Operating Hours**				
Management of operations in accordance with the approved operating hours. ***(Note: No activities and operations are proposed on public holidays).***					
2.1	Undertake extraction and processing activities south of Rhondda Road between 6:00am and 8:00pm on Monday to Fridays and 6:00am to 2:00pm on Saturdays.	During operations		***See Project Approval Schedule 3 condition 6*** Quarry extraction and processing activities south of Rhondda Road occur between 6:00am and 8:00pm on Monday to Fridays and 6:00am to 2:00pm on Saturdays.	**Compliant**
2.2	Undertake extraction and processing activities north of Rhondda Road between 7:00am and 8:00pm on Monday to Friday and 7:00am and 2:00pm on Saturdays.	During operations		Quarry operations north of Rhondda Road ceased in August 2013 and are not planned to re- commence until Year 9-10 (i.e. about 2022).	**Not yet active**
2.3	Undertake product transportation activities 24hrs/day between 4:00am Monday to 6:00pm Saturday.	During operations	• Truck Movement Records Aug-Dec 2013	***See Project Approval Schedule 2 condition 9*** Product transportation activities from the Teralba Quarry occur between 6:00am and 6:00pm Monday to Saturday in accordance with the Project Approval Schedule 2 condition 9.	**Compliant**
2.4	Undertake all blasts between 10:00am and 4:00pm Monday to Friday.	During operations	• Blast Monitoring Records 2013	Blasts are only conducted between 10:00am and 4:00pm Monday to Friday.	**Compliant**
2.5	Restrict activities undertaken outside the hours identified is Commitments 2.1 and 2.2 to routine, low noise activities such as oil changes, minor welding and servicing of equipment.	During operations		Activities undertaken outside of the Hours of Work required under the Project Approval are not associated with resource extraction or transport of product.	**Compliant**
2.6	The nominated operating hours above in Action 2.3 do not apply to the delivery of material if that material is requested by police.	Details of the circumstances of these requests			**Noted**

SoC No.	Action	Timing	Verification	Comment	Compliance
	any emergency service or Council.	would be provided to the D-G and EPA within a reasonable period of the request.			
3	**Waste Management**				
Minimisation of general waste creation and maximisation of recycling, wherever possible.					
3.1	Place all paper and general wastes originating from the site office, together with routine maintenance consumables from the daily servicing of equipment in garbage bins located adjacent to the site office and workshop.	Ongoing	• Waste Management Plan, Appendix 1 Waste Management Matrix, Oct 2013	***See Project Approval Schedule 3 condition 47 and 48*** The waste generated by the project is appropriately stored and handled on site with all waste segregated into separate bins, containers or tanks and the wastes are collected for recycling/disposal by Trans-Pacific Waste contractors, and Sell and Parker Metal Recycling Services.	Compliant
3.2	Segregate waste into recyclables and non-recyclable materials for removal by a licensed Contractor.	Ongoing	• Waste Management Plan, section 9.7, Oct 2013		Compliant
	Minimisation of the potential risk of environmental impact due to waste creation, storage and/or disposal.		• Waste Management Plan, section 9.6, Oct 2013	 **Waste oil and grease bunded storage area.**	Compliant
3.3	Organise the regular collection of industrial Wastes.	Monthly or as needs basis	• Waste Management Plan, Oct 2013		Compliant
3.4	Store waste oils and greases within the workshop area in either self-bunding containers or within suitably contained areas.	Ongoing	• Waste Management Plan, section 9.6, Oct 2013		Compliant
4	**Security and Safety**				
All members of the public are safe when near Teralba Quarry.					
4.1	Construct and maintain the perimeter fence around the Northern Extension.	Prior to commencement of clearing works		Perimeter fence has been installed around the Northern Extension Area.	Compliant
4.2	Maintain lockable gates at all entry/exit points. Lock gates outside of operational hours	Ongoing		Lockable gates have been installed and maintained at the entry and exit points from the Teralba Quarry sites.	Compliant
4.3	Erect security warning signs at strategic locations around and within the Project Site.	Ongoing		Security warning signs are present around the site to warn of earthmoving equipment/vehicle movements.	Compliant

SoC No.	Action	Timing	Verification	Comment	Compliance
	The signs would identify the presence of earthmoving equipment, deep excavations and steep slopes.			deep excavations and steep slopes of quarry excavation areas.	
4.4	Continue to induct employees in safe working practices and hold regular follow-up safety meetings and reviews.	Ongoing		Induction of employees in relation to safety and safe working practices occurs for all employees with follow-up Toolbox talks and meetings conducted to maintain employee awareness.	Compliant
4.5	Install bunds along the margins of all internal haul roads where those roads are positioned adjacent to steep slopes, adjacent to the boundary of the extraction area and adjacent to all other steep slopes	Ongoing		Internal roads have the boundary of the access routes marked to provide guidance to drivers in relation to safe distances from slopes adjacent to extraction areas.	Compliant
4.6	Ensure all trucks from the Project Site are driven in a safe and courteous manner in accordance with Metromix's Driver Code of Conduct.		• Transport Management Plan, Appendix 1, Oct 2013 • Drivers Code of Conduct, Oct 2013	The Traffic Management Plan (section 6.2) describes Competence Training and Awareness for all drivers / employees and covers site traffic rules, safe site delivery, Drivers Code of Conduct, maximum hourly despatch rates and operation and maintenance of wheel washes.	Compliant
5	**Rehabilitation and Biodiversity Offset Management**				
Create a stable final landform able to support a range of final land uses focused upon ecological corridors and ongoing industrial uses					
5.1	Retain 142.6ha of existing vegetation and remnant understorey vegetation as a legally protected biodiversity offset.	In perpetuity	• Landscape Management Plan (draft), Figure 9.1, Feb 2014	***See Project Approval Schedule 3 condition 52 and 53*** The Biodiversity Offset Strategy and Landscape Management Plan identifies the area of retained vegetation to be protected (yet to be approved by OEH).	In progress
	Maintenance of long term ecological values within the Final Biodiversity Offset.		• Landscape Management Plan (draft), Feb 2014		In progress
5.2	Ensure that 142.6ha of retained vegetation within the Biodiversity Offset is legally protected through a Conservation Agreement pursuant to Section 69B of the National Parks and Wildlife Act 1974.	By 30 June 2014.	• Landscape Management Plan (draft), Figure 9.1, Feb 2014		In progress
6	**Groundwater**				
Prevention of groundwater contamination					
6.1	Securely store all hydrocarbon products within designated and bunded areas – see Action 16.11	Ongoing		***See Project Approval Schedule 3 condition 25 and SoC 7.12*** Petroleum products on site (diesel and oils) are held in appropriately bunded areas with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund (in accordance with AS1940-2004 and the DECC Storing and Handling Liquids: Environmental Protection Manual).	Compliant
6.2	Refuel and maintain all earthmoving equipment within designated areas – see Action 16.11.	Ongoing		***See SoC 7.13*** Refuelling of vehicles and equipment only occurs in designated areas and maintenance is undertaken at the site workshops.	Compliant

SoC No.	Action	Timing	Verification	Comment	Compliance
6.3	Prepare a Groundwater Management Plan, including trigger levels for actions – see Action 16.3.	Ongoing	• Water Management Plan section 7.2,Aug 2013	***See Project Approval Schedule 3 condition 26(c)*** Groundwater Management has been prepared in Water Management Plan section 7.2 and addresses trigger levels for actions.	Compliant
6.4	Prepare a Spill Management Plan to address potentially significant hydrocarbon spills – see Action 16.11.	Ongoing	• Water Management Plan, Aug 2013	***See SoC 7.13*** Spill Management Plan is included in the Water Management Plan section 7.3.5.	Compliant
Continuous monitoring of groundwater throughout the life of the Project.					
6.5	Develop and implement a monitoring program as part of the Soil and Water Management Plan.	Within 6 months of the receipt of project approval.	• Water Management Plan section 9.5, Aug 2013	***See EPL condition M2.3 and Project Approval Schedule 3 condition 26(b)*** Groundwater monitoring is addressed in the Water Management Plan.	Compliant
6.6	Monitor water quality at the Mine Adit Dam for pH levels, electrical conductivity, suspended solids, and oil and grease.	Monthly (subject to review).	• Water Management Plan section 9, Aug 2013	***See EPL condition M2.3 and See Project Approval Schedule 3 condition 26(b)*** Water quality monitoring of the Mine Adit Dam for pH levels, electrical conductivity, suspended solids, and oil and grease is conducted monthly and in accordance with EPL condition M2.3.	Compliant
6.7	Record flows/discharges from the Mine Adit Dam as well as quarry water usage.	Continuous	• Water Management Plan section 9.5, Aug 2013	***See EPL condition M8.1*** Flow and discharge rate from the Mine Adit Dam A is recorded continuously by an automatic monitor at the discharge point.	Compliant
6.8	Review monitoring results to identify trends which may indicate impacts and allow mitigation measures to be implemented, if required.	Annually		All monitoring data is reviewed annually during preparation of the Annual Review Report for the Teralba Quarry (the first Annual Review is due for submission to DP&I in March 2014).	In progress
6.9	Ensure all monitoring data is incorporated into each Annual Environment Management Report for the Teralba Quarry.	Annually		All monitoring data will be incorporated into the Annual Review Report for the Teralba Quarry (the first Annual Review is due for submission to DP&I in March 2014).	In progress
7	**Surface Water**				
Maintenance of surface water quality.					
7.1	Conduct site clearing activities in accordance with the Blue Book (Landcom, 2004) guidelines for erosion and sediment control.	Ongoing	• *'Managing Urban Stormwater, Soils and Construction, Volume 2E, Mines and Quarries'*, DECC, 2004	Vegetation clearing activities are conducted in accordance with the Erosion and Sediment Control Plan and the Blue Book guidelines for erosion and sediment control.	Compliant
7.2	Establish a regular monitoring program to review the effectiveness of all erosion and sediment control mitigation measures.	Prior to commencement of clearing works	• Water Management Plan Appendix 1	***See Project Approval Schedule 3 condition 26(b)*** The Erosion and Sediment Control Plan was prepared as part of the Water Management Plan Appendix 1 section 3.3.4 includes a regular monitoring program for the erosion and sediment structures.	Compliant
7.3	Incorporate an update of the current Water Management Plan (GHD, 2007) into the Soil and Water Management Plan to take into	Within 6 months of date of project approval.	• Emails to DP&I re Water Management Plan, 22	***See Project Approval Schedule 3 condition 23*** The Water Management Plan was prepared in consultation with the Lake Macquarie City Council	In progress

SoC No.	Action	Timing	Verification	Comment	Compliance
	account the proposed Southern and Northern Extensions.		Aug 2013 • Water Management Plan, Aug 2013 • Letter from DP&I re Water Management Plan, 16 Jan 2014	and the NSW Office of Water (NOW), and submitted to DP&I on 22 August 2013. Comments were received from DP&I on 16 January 2014. The Water Management Plan was being revised to address the DP&I comments and Environment Protection Licence No. 536 (draft Variation) 7 Feb 2014, at the date of this audit.	
7.4	Ensuring any off-site discharge is monitored and reported in accordance with Environment Protection Licence 536.	As required	• Environment Protection Licence No. 536 (draft Variation) 7 Feb 2014 • Water Management Plan Appendix 1	***See Project Approval Schedule 3 condition 26(b)*** Monitoring of the discharge from the EPA approved monitoring points has occurred and reported in accordance with EPL condition P1.2, L2.4 and M2.3	**Compliant**
7.5	Conduct site clearing activities in accordance with the Blue Book (Landcom, 2004) guidelines for erosion and sediment control.	Ongoing		***See SoC 7.1***	**Repeat SoC's as noted**
7.6	Establish a regular monitoring program to review the effectiveness of all erosion and sediment control mitigation measures	Prior to commencement of clearing works		***See SoC 7.2***	
7.7	Incorporate an update of the current Water Management Plan (GHD, 2007) into the Soil and Water Management Plan to take into account the proposed Southern and Northern Extensions.	Within 6 months of date of project approval		***See SoC 7.3***	
7.8	Ensuring any off-site discharge is monitored and reported in accordance with Environment Protection Licence 536.	As required		***See SoC 7.4***	
Capture of sediment-laden water flows from project related disturbance					
7.9	Provide sufficient storage during all stages of works to prevent discharge off-site of sediment-laden water in accordance with the Blue Book (Landcom, 2004) guidelines for sediment retention dams.	Ongoing	• Erosion and Sediment Control Plan, section 3.3.3.2 • *'Managing Urban Stormwater, Soils and Construction, Volume 2E, Mines and Quarries'*, DECC, 2004	***See Project Approval Schedule 3 condition 26(b)*** The erosion and sediment control measures constructed on the Teralba Quarry site appear to have adequate capacity to retain and settle sediment containing runoff from the disturbed areas of the site. The calculations for the sediment dam capacities were based on the New South Wales Department of Housing and Landcom's "Blue Book", "*Managing Urban Stormwater – Soils and Construction Volume 1 (2004)* for site soils as "D/F". Selection of the rainfall is based on "*Managing Urban Stormwater, Soils and Construction, Volume 2E, Mines and Quarries*" The calculations for the sediment dam capacities are conservative and the sediment dams inspected during the site visit had their design capacity available for collection and settlement of surface runoff.	**Compliant**
7.10	Inspect all sediment dams and maintain as necessary (keep records).	Monthly or following rainfall exceeding	• Erosion and Sediment Control Plan, Table 3	Sediment dam inspections are conducted weekly and within 24hr after rainfall events >10mm/24hr.	**Compliant**

SoC No.	Action	Timing	Verification	Comment	Compliance
		100mm in 2 days.			
7.11	Remove accumulated sediment from sediment dams when storage capacity reduced by 25% - document activity in maintenance records.	Following routine inspection.	• Erosion and Sediment Control Plan, Table 3	Sediment dam inspections are conducted weekly and within 24hr after rainfall events >10mm/24hr and sediment removed to ensure 70% dam capacity is available.	Compliant
Prevention of hydrocarbon contamination of water on the Project Site.					
7.12	Securely store all hydrocarbon products within designated and bunded areas.	Ongoing		Diesel storage for use on the Teralba Quarry site is adjacent to the workshop area in two (2) bunded aboveground tanks.	Compliant
7.13	Refuel all earthmoving equipment within designated areas (with spill control).	Ongoing	• Water Management Plan, Aug 2013	***See SoC 7.13*** Spill Management Plan is included in the Water Management Plan section 7.3.5.	Compliant
Separation of groundwater and surface water flows.					
7.14	Construct a drain from Dam B directly to the nearby watercourse to divert surface flows away from the Mine Adit Dam.	Within 3 months of Project Approval or following advice from NOW whichever occurs sooner.		A discharge point has been established from Dam B to the nearby watercourse to divert surface water flows away from the Mine Adit Dam A.	Compliant
8	**Terrestrial Flora and Fauna**				
Minimisation of impacts on flora and fauna within the Project Site.					
8.1	Prepare and implement a Site Vegetation Management Plan (as part of the overall Landscape Management Plan – see SoC16.7.	Within 12 months of the receipt of project approval	• Landscape Management Plan (draft), Feb 2014	Landscape Management Plan (draft) February 2014 includes short, medium and long term vegetation management measures.	In progress
8.2	Clearly define the *Tetratheca juncea* sub-populations to be retained.	For the life of the Project	• Landscape Management Plan (draft), Feb 2014	Areas of *Tetratheca juncea* identified on the Teralba Quarry site have been clearly identified as NO-GO areas.	Compliant Ongoing
8.3	Continue the established rehabilitation practices in appropriate areas.	Ongoing.	• Landscape Management Plan (draft), Feb 2014	Rehabilitation practices established for the Teralba Quarry site have been successful and the reuse of site topsoil and biomass will continue to be applied to disturbed areas.	Compliant
8.4	Retain the extracted topsoil and vegetation within the immediate area of *Tetratheca juncea* populations and relocate to easement locations.	During clearing	• Landscape Management Plan (draft), Feb 2014	Topsoil removed within areas of defined populations of *Tetratheca juncea* is directly replaced in the decommissioned power line easements	Compliant Ongoing
8.5	Transfer biomass directly from vegetation clearing operations to rehabilitation areas. If it is not possible to transfer directly, stockpile material.	Ongoing	• Landscape Management Plan (draft), Feb 2014	Rehabilitation practices established for the Teralba Quarry site have been successful and the reuse of site topsoil and biomass will continue to be applied to disturbed areas.	Compliant
8.6	Control noxious weeds at all times in accordance with a Weed Management Plan (to be incorporated into the site Vegetation Management Plan).	Following approval of Landscape Management Plan (see Action 16.7) and then ongoing.	• Landscape Management Plan (draft), Feb 2014		Not yet activated

SoC No.	Action	Timing	Verification	Comment	Compliance
8.7	Install species specific nesting boxes for fauna species displaced following clearing activities, re 20 boxes for microbats, 20 boxes for Little Lorikeets and 30 boxes for Sugar Gliders.	Prior to commencement of activities in the Northern Extension	• Landscape Management Plan (draft), Feb 2014	Works at the Northern Extension Area have not yet commenced.	Not yet activated
9	**Traffic and Transport**				
Transport operations are undertaken with minimal impact on other road users and residents.					
9.1	Limit laden quarry-related truck movement numbers through Teralba: – 9 per hour; and – 85 per day.	Ongoing	• Teralba Truck Movements, Aug to Dec 2013	***See Project Approval Schedule 2 condition 9*** The number of laden trucks dispatched from the Teralba Quarry between July 2013 and January 2014, comply with the limits of hourly truck dispatch rates in Project Approval Schedule 2 condition 9.	Compliant
9.2	Ensure that no product trucks from Teralba Quarry travel eastward through Teralba between 6:00pm and 6:00am.	Ongoing	• Teralba Quarry Traffic Non-compliances 2013	***See Project Approval Schedule 2 condition 9*** The small number of non-compliances with the truck dispatch time limits have resulted generally from contractors' preloaded at the Teralba Quarry the night before and leaving their depot next to the Quarry the next morning to make deliveries prior to 6am.	Generally Compliant
9.3	Ensure all vehicles exiting the Project Site pass through a wheel-wash facility to remove dust generating material.	Prior to removal of product from within the extensions.	• Traffic Management Plan, Oct 2013 • Drivers Code of Conduct Appendix 1	All vehicles exiting the Project Site pass through a wheel-wash facility to remove dirt / dust generating material prior to the vehicle reaching the public roads.	Compliant
9.4	Provide a contribution to Lake Macquarie City Council during the ongoing life of the quarry if a suitable project approval is granted.	Quarterly		***See Project Approval Schedule 2 condition 17*** Metromix have consulted with the Council in relation to the agreement for the payment of the 0.066c per tonne per kilometre (¢/km) for every tonne of quarry products transported from the site on roads for which Council is liable for road maintenance funding. The Council lawyers were to draft the agreement for signing by the two parties, but this had not been completed at the date of this audit.	In progress
9.5	Prepare, implement and enforce 'Drivers Code of Conduct' addressing: – times that trucks can operate, especially through Teralba – speed limits; – duty of care to other drivers and pedestrians; – complaints procedure; – covering loads; and – avoidance of exhaust brakes.	Prepare within 4 months of receipt of project approval.	• Traffic Management Plan, Oct 2013 • Drivers Code of Conduct Appendix 1	***See Project Approval Schedule 3 condition 44*** The Traffic Management Plan (section 6.2) describes Competence Training and Awareness for all drivers / employees and covers site traffic rules, safe site delivery, Drivers Code of Conduct, maximum hourly despatch rates and operation and maintenance of wheel washes. All trucks leaving the Teralba Quarry site must also have their loads covered.	Compliant
9.6	Undertake all transport activities in accordance with the project approval and Environment Protection Licence 0536.	Ongoing	• Traffic Management Plan, Oct 2013 • Drivers Code of Conduct Appendix 1	***See Project Approval Schedule 3 conditions 31to 44*** Transport activities are managed in accordance with the approved Traffic Management Plan.	Compliant
9.7	Ensure that only trucks owned by Metromix, or	Ongoing	• Traffic Management Plan,	***See Project Approval Schedule 3 condition 38***	Compliant

SoC No.	Action	Timing	Verification	Comment	Compliance
	its shareholders and those of accredited contractors using airbag suspension and other noise controls are used to transport products between 10:00pm and 6:00am.		Oct 2013 • Drivers Code of Conduct Appendix 1	All trucks owned by Metromix, and its approved contractors and fitted with airbag suspension.	
9.8	Ensure that all project-related vehicles are regularly serviced to ensure engine efficiencies are maintained at a standard that limits truck noise.	Ongoing	• Traffic Management Plan, Oct 2013 • Drivers Code of Conduct Appendix 1	All project-related vehicles are regularly serviced to ensure engine efficiencies are maintained at a standard that limits truck noise	Compliant
10	**Noise and Vibration**				
The Project is designed to minimise and/or mitigate noise emissions received at surrounding residences and other sensitive receivers					
10.1	Ensure all mobile earthmoving equipment used on site is not fitted with high-frequency reversing alarms and is regularly serviced.		• Transport Management Plan, Oct 2013 • Noise Management Plan, section 8, 16 Jan 2014	All mobile earthmoving equipment used on site is fitted with 'quacker' reversing alarms and the equipment is regularly serviced to ensure noise emissions are controlled to within acceptable levels.	Compliant
10.2	Ensure all earthmoving equipment used on site (including temporary equipment) have sound power levels and frequency spectra consistent with those nominated in Section 6 of Spectrum Acoustics (2011).	When new or temporary equipment is brought to site.	• Transport Management Plan, Oct 2013 • Noise Management Plan, section 8, 16 Jan 2014	Independent noise monitoring of the mobile earthmoving equipment (bulldozer and haul trucks) on site occurs by Spectrum Acoustics, to ensure the sound power levels are acceptable.	Compliant
All activities are undertaken in such a manner as to reduce the noise level generated and minimise impacts on surrounding landholders and/or residents.					
10.3	Ensure that the eastern side of the Southern Extension is extracted in such a manner that the active extraction face is retained on the eastern face thereby providing a topographic barrier between operating earthmoving equipment and residences to the east.	Ongoing throughout the extraction operations in the Southern Extension area.	• Noise Management Plan, section 8.3, 16 Jan 2014	The Southern Extension Area extraction is planned for the active face to be retained on the eastern side to provide a topographic barrier between operating earthmoving equipment and the residences to the east.	Compliant Ongoing
10.4	Construct a 5m high bund on the eastern edge of the Mid Pit Extraction Area.	During Mid Pit Extraction operations.		No Mid-Pit extraction activities have been conducted since August 2013.	Not active
All activities are undertaken in such a manner as to reduce the noise level generated and minimise impacts on surrounding landholders and/or residents.					
10.5	Limit transportation noise by ensuring: – all transport vehicles comply with the RTA's noise limits at all times; – only trucks fitted with airbag suspension be used to transport products from the quarry between 10:00pm and 6:00am; and – drivers comply with Code of Conduct.	Ongoing	• Transport Management Plan, Oct 2013 • Noise Management Plan, section 8.4, 16 Jan 2014	***Refer to Project Approval Schedule 2 condition 18 and EPL condition O1.1*** The noise attributed to trucks travelling to and from the Teralba Quarry is controlled by: • All trucks under the control of Metromix, comply at all times with the RTA's noise limits. • Only those trucks under the control of Metromix, its shareholders and approved contractors, and fitted with airbag suspension, are used to transport products from the Teralba Quarry between 6:00pm and 6:00am Monday to Saturday. • All drivers sign the Drivers Code of Conduct to ensure high standard of driver performance	Complaint

SoC No.	Action	Timing	Verification	Comment	Compliance
				including the need to, avoid use of exhaust brakes in built-up areas and travel at required speeds.	
10.6	Commission a noise monitoring program that comprises: – attended noise monitoring for the Southern and Northern Extensions; and – General noise monitoring.	Within the first 3 months of operations in the Southern and Northern Extensions	• Noise Management Plan, section 9, 16 Jan 2014	Noise monitoring is outlined in the Noise Management Plan: • Independent monitoring will be undertaken during the first 2 years of operations at 6 monthly intervals coinciding with wind blowing in a predominantly eastern and western direction. • The frequency of monitoring will then revert to annual monitoring during a period of wind blowing from the western quadrant towards residences in Teralba.	In progress
10.7	Include a summary of all noise monitoring results in the AEMR.	Annually.	• Noise Management Plan, section 11.5, 16 Jan 2014	Noise monitoring results will be included in the Annual Review. The first Annual Review Report is due in March 2014.	In progress
10.8	Ensure all trucks departing the Project Site via the bottom gate travel at speeds <15km/hr.	Ongoing	• Transport Management Plan, Oct 2013	Trucks departing the Teralba Quarry site via the bottom gate to Railway Street are restricted to speeds of less than15km/hr.	Compliant
10.9	Review blast designs and modify, if required.	When blasting within 500m of any residence.			Noted
11	**Air Quality**				
Site activities are undertaken without exceeding DECCW air quality criteria or goals.					
11.1	Minimise clearing ahead of extraction activities.	Ongoing	• Air Quality Management Plan, Oct 2013	Vegetation clearance is minimised ahead of extraction activities to reduce dust generation and visual amenity impact.	Compliant
11.2	Minimise the construction of minor roads and access tracks for soil stripping, extraction operations and rehabilitation.	Ongoing	• Air Quality Management Plan, Oct 2013	No construction of minor roads and access tracks will occur for soil stripping, extraction operations and rehabilitation	Compliant
11.3	Operate a water truck to manage dust suppression during periods of extended dry weather and/or high winds, or when dust nuisance has the potential to occur as a result of quarrying activities.	Ongoing	• Air Quality Management Plan, section 8.2, Oct 2013	During periods of high wind speeds (typically from the western quadrant): activities capable of generating dust will be curtailed and additional water will be applied to internal roads in use for hauling primary raw feed and any other open areas capable of generating dust will be watered with the water truck.	Compliant
11.4	Stockpile material in sheltered locations away from sensitive receptors	Ongoing	• Air Quality Management Plan, Oct 2013	Stockpiles are established in locations away from sensitive receptors.	Compliant
11.5	Shield and/or suppress dust on conveyors and transfer points.	Ongoing	• Air Quality Management Plan, section 6, Oct 2013	Mist sprays / dust suppression is installed on conveyors and transfer points to suppress dust.	Compliant
11.6	Limit internal road dust lift off by: – surfacing (and grading local) roads with appropriate materials; – enforcing a 30km/hr speed limit on all internal roads;	Ongoing	• Air Quality Management Plan, Oct 2013 • Transport Management Plan, Oct 2013	Internal roads are surfaced to reduce dust, 30km/hr speed limit is enforced on all internal roads, and spillage during truck loading and transport is minimised to ensure that product is not lost over truck sidewalls and all loads are covered during	Compliant

SoC No.	Action	Timing	Verification	Comment	Compliance
	– limiting load sizes to ensure that product does not extend over truck sidewalls; and – avoiding spillage during truck loading.			transport.	
11.7	Minimise dump heights from trucks, front-end loaders and conveyors.	Ongoing	• Air Quality Management Plan, Oct 2013	Dump heights from trucks, front-end loaders and conveyors is minimised to reduce dust generation.	Compliant
11.8	Schedule blasts so that they do not occur during high wind situations	Ongoing	• Blast Management Plan, Oct 2013	Blasts are not scheduled to occur during high wind situations.	Compliant
11.9	Cease or modify activities on dry windy days when dust plumes are visible.	Ongoing.	• Air Quality Management Plan, section 8.2, Oct 2013	During periods of high wind (typically from the western quadrant): activities capable of generating dust will be curtailed in the higher exposed areas;	Compliant
11.10	Water exposed areas not covered by gravel under dry and windy conditions when dust plumes are visible.	Ongoing.	• Air Quality Management Plan, section 8.2, Oct 2013	During periods of high wind (typically from the western quadrant): activities capable of generating dust will be watered with the water truck.	Compliant
11.11	Adopt a complaints management system where all complaints are dealt with through investigation and implementation of corrective treatments	Ongoing.	• Air Quality Management Plan, Oct 2013	The complaints management system developed for the Teralba Quarry operations is included in each Management Plan as a flowchart that outlines the process for receipt and actions to be taken in the event of a complaint.	Compliant
11.12	Minimise truck queuing, unnecessary idling of trucks and unnecessary trips through logistical planning, where possible.	Ongoing.		Planning of truck loading and transport from the Teralba Quarry site reduces the queuing of trucks on site and unnecessary idling of trucks.	Compliant
11.13	Ensure the on-site wheel wash reduces mud tracking along Railway Street.	Ongoing.		Wheel washes have been installed before the exit to Railway Street from the Teralba Quarry to reduce the potential for mud tracking onto the public road.	Compliant Ongoing
11.14	Remove any mud tracking on Rhondda Road as a result of quarry movements.	Ongoing.		Wheel washes have been installed at the exit to Rhondda Road from the Teralba Quarry to reduce the potential for mud tracking onto the public road.	Compliant Ongoing
11.15	Prepare and implement a Dust Management Plan for the quarry.	Within 4 months of the receipt of project approval.		Dust management is included in the Air Quality Management Plan prepared for the Teralba Quarry in August 2013 and submitted to the DP&I.	Compliant
Reduce the impact of Greenhouse Gas emissions from project related activities					
11.16	Minimise the impacts of greenhouse gases relating from diesel consumption by: – minimising the use of haul trucks through use of an overland conveyor; – reduce vehicle idling time; – maintaining optimum tyre pressures; and – the optimisation of haul routes to reduce transportation distance from the extraction areas.	Ongoing.	• Air Quality Management Plan, section 8.4, Oct 2013	***Diesel Consumption*** Introduction of a conveyor for primary-crushed rock to be transported from the primary crusher within the active extraction area to the processing plant in the Southern Extension Area is being investigated. Installation of a conveyor from the Northern Extension Area to the processing plant will occur when the Rhondda Road underpass is completed ***Reduce Vehicle Idling Time*** All operators are required to operate equipment to reduce idling time by turning engines off during length periods of inactivity. ***Maintaining Optimal Tyre Pressures*** Each tyred vehicle will have optimal pressures identified for each tyre. ***Optimising Haul Routes***	In progress

SoC No.	Action	Timing	Verification	Comment	Compliance
				Haul routes between the raw feed loading area and either the processing plant or primary crusher are optimised and internal haul roads are progressively re-located to maintain the shortest distance and grade for haul truck travel.	
Record and monitor the local environment regarding impacts.					
11.17	Minimise the impacts of greenhouse gases relating from electricity consumption by: – ensuring the most efficient crusher and other processing plant technology is used; – regularly inspecting the daily operations of lighting; and – implementing solar-powered lighting, where possible.	Ongoing.	• Air Quality Management Plan, section 8.4, Oct 2013	- Introduction of a conveyor for primary-crushed rock to be transported from the primary crusher within the active extraction area to the processing plant in the Southern Extension Area is being investigated. Installation of a conveyor from the Northern Extension Area to the processing plant will occur when the Rhondda Road underpass is completed. - Monthly checks are conducted for all external lighting and use of lumatrol switches that are activated by reduced levels of light. Investigation of the feasibility of introducing solar power panels on remote items of equipment to minimise the use main electrical power.	**Compliant Ongoing**
11.18	Continue to monitor dust impacts through: – the existing five deposited dust gauges; and – on-site meteorological monitoring to record relevant parameters	Ongoing	• Air Quality Management Plan, Oct 2013	Monitoring of dust deposition and meteorological parameters had continued at the Teralba Quarry site.	**Compliant**
12	**Visibility**				
Reduce the impact of the Project on the visual amenity of private and public vantage points					
12.1	Ensure all vegetation is maintained outside the Southern and Northern Extensions to provide long term shielding.	Ongoing	Eastern vegetation maintained to provide visual screen of Southern Extension Area	The planning for the development of the Southern Extension Area has commenced and the vegetation on the eastern side of the Area has been retained to provide a visual screen.	**Compliant Ongoing**
		Eastern vegetation maintained to provide visual screen of Southern Extension Area			
12.2	Sequence extraction activities in the Southern Extension to limit exposure of western faces until vegetation is well established.	Years 3 to 11 (approx).			**Not yet activated**
12.3	Progressively establish vegetation on extraction faces at 50mAHD and above in western section of the Southern Extension.	Years 3 to 11 (approx).			**Not yet activated**
12.4	Advance extraction in the eastern section of the Southern Extension in strips parallel to	Years 22 to 30 (approx).			**Not yet activated**

SoC No.	Action	Timing	Verification	Comment	Compliance
	north-south faces.				
12.5	Include Annual photographs of progressive rehabilitation of quarry benches in each AEMR.	Annually		Photographs of progressive rehabilitation will be included in the Annual Review (the first Annual Review is due in March 2014).	In progress
13	**Heritage**				
Provide appropriate protection to existing					
13.1	Halt all works in the immediate area if cultural objects are found and contact a suitably qualified archaeologist and Aboriginal community representative.	Ongoing	• Aboriginal Heritage Management Plan, section 7, Aug 2013	No cultural objects had been found prior to this audit.	Noted
13.2	Halt all works in the immediate area if human remains are found and contact NSW Police, Aboriginal community representative and OEH.	Ongoing	• Aboriginal Heritage Management Plan, section 7, Aug 2013	No human remains had been found prior to this audit.	Noted
13.3	Maintain reasonable efforts to avoid impacts to Aboriginal cultural heritage values at all stages of the development works	Ongoing	• Aboriginal Heritage Management Plan, section 7, Aug 2013		Noted
13.4	Invite representatives of Local Aboriginal stakeholders to monitor initial ground disturbance activities.	Prior to soil stripping campaigns.	• Aboriginal Heritage Management Plan, Aug 2013		Noted
13.5	Develop an Aboriginal Culture Educational Program for the induction of all personnel and contractors involved in the construction activities on site. Records are to be kept of which staff / contractors were inducted and when for the duration of the project. The program would be developed and implemented in collaboration with the local Aboriginal community.	Prior to first soil stripping campaign and then ongoing.	• Aboriginal Heritage Management Plan, sections 5 and 6, Aug 2013	Personnel induction for the Teralba Quarry employees and contractors includes an introduction to Aboriginal heritage management issues.	Noted Ongoing
	Provide appropriate protection to any non-Aboriginal artefacts identified in operational areas.			No non-Aboriginal items had been identified in operational areas prior to this audit.	Noted
13.6	Halt all works in the immediate area if any non-Aboriginal artefacts are found and notify the Heritage Council of NSW.	Ongoing			Noted
14	**Soils**				
Prevent excessive soil deterioration during stripping and transportation					
14.1	Undertake soil stripping within slightly moist condition and avoid excessively wet or dry conditions.	During soil stripping operations	• Landscape Management Plan (draft), section 12.2, Feb 2014	Stripping of soil materials only occurs when the material is moderately moist to preserve soil structure and prevent erosion and reduce dust generation.	Compliant Ongoing
14.2	Place stripped soil directly onto reshaped overburden or dedicated stockpile area.	During soil stripping operations	• Landscape Management Plan (draft), section 12.2.1, Feb 2014	Topsoil and subsoil materials are stockpiled separately as low, flat mounds to a maximum height of 2m (topsoil) and 4m (subsoil) to maintain the available seed bank.	Compliant Ongoing
14.3	Remove soil through grading or pushing soil into windrows with graders or dozers for later	During soil stripping operations	• Landscape Management Plan (draft), section		Noted

SoC No.	Action	Timing	Verification	Comment	Compliance
	collection for loading into rear dump trucks by front-end loaders.		12.2.1, Feb 2014		
Retention of soil viability until use in rehabilitation.					
14.4	Leave the surface of soil stockpiles in as coarsely structured a condition as possible in order to promote infiltration and minimise erosion until vegetation is established.	Immediately following stockpile construction	• Landscape Management Plan (draft), section 12.2.1, Feb 2014	Direct transfer of available topsoil and subsoil onto active rehabilitation areas is practised where practicable.	Compliant Ongoing
14.5	Maintain a maximum stockpile height of 3m. Clayey soils would be stored in lower stockpiles for shorter periods of time compared to coarser textured sandy soils.	During staged Rehabilitation stages.	• Landscape Management Plan (draft), section 12.2.1, Feb 2014	Soil stockpiles are constructed as low, flat mounds to a maximum height of 2m (topsoil) and 4m (subsoil) to maintain the available seed bank.	Compliant Ongoing
14.6	Seed soil stockpiles with sterile cover crop (and limited fertiliser) as soon as possible where stockpiling is planned.	Immediately following stockpile construction.	• Landscape Management Plan (draft), section 12.2.1, Feb 2014	Locally sourced seed or plant tube stock is applied within the substrate on stockpiles or each bench to promote the propagation of native vegetation. The ongoing progressive rehabilitation undertaken on the Teralba Quarry site has indicated that this transfer of biomass material, accompanied by bush regeneration has been successful in the re-establishment of an open forest vegetation community with respect to both species communities and general vegetation structure.	Compliant Ongoing
14.7	Maintain an inventory of available soil to ensure adequate topsoil materials are available for planned rehabilitation activities.	Immediately following stockpile construction	• Landscape Management Plan (draft), section 14.2, Feb 2014	The active quarry plan provides an inventory of available soil for planned rehabilitation activities.	Compliant Ongoing
14.8	Assess soil stockpiles for weed infestation to determine if stockpiles require weed removal applications before being re-spread onto reshaped overburden.	Ongoing	• Landscape Management Plan (draft), section 12.2.7, Feb 2014	An annual weed and pest inspection and reporting program provides an overview of the weed and pest management measures to be implemented.	Compliant Ongoing
Achieve a good soil cover for long term rehabilitation.					
14.9	Spread topsoil to a minimum depth range of 0.1 m (steep slopes) to 0.2m (flatter areas). Specific topsoil respreading depths for different post mining landform elements would be specified in the Landscape Management Plan.	During staged Rehabilitation stages.	• Landscape Management Plan (draft), section 16, Feb 2014	The evaluation of rehabilitation described in the Landscape Management Plan (draft), section 17, requires topsoil to be spread to a minimum depth range of 0.1 m (steep slopes) to 0.2m (flatter areas).	Compliant Ongoing
15	**Bushfire Hazard**				
Avoidance of any fires on site, particularly in native vegetation					
15.1	Adopt appropriate controls during re-fuelling.	Ongoing			
15.2	Ensure fire extinguishers are fitted to all site vehicles.	Ongoing		All site vehicles have fire extinguishers installed.	Compliant
15.3	Incorporate a Bushfire Management Plan in the overall Emergency Response Plan for the quarry.	Within 6 months of the receipt of project approval.	• Landscape Management Plan (draft), section 12.2.9, Feb 2014	A Bushfire Management Plan (dated February 2014) has been prepared as part of the Landscape Management Plan for the Teralba Quarry.	Compliant
16	**Documentation and Further Approvals**				
To provide site personnel with the necessary guidance on the expectations of Metromix management and the NSW Government and LMCC to achieve the required level of environmental performance.					
16.1	Environmental Management Strategy.	Within 6 months of	• Environmental	***See Project Approval Schedule 5 condition 1***	Compliant

SoC No.	Action	Timing	Verification	Comment	Compliance
		the receipt of project approval	Management Strategy, Jan 2014	An Environmental Management Strategy was prepared in Aug 2013 and submitted to DPI.	
16.2	Environmental Management Plans (EMP). Focus on the next 5 years	Within 6 months of the receipt of project approval		***See Project Approval Schedule 5 condition 3*** Environmental Management Plans (EMP) were prepared in August 2013 and submitted to the DP&I for approval.	Compliant
16.3	Soil and Water Management Plan. (Incorporating management, monitoring and contingency plans for soils, surface water and groundwater).	Within 6 months of the receipt of project approval	• Water Management Plan, Aug 2013	***See Project Approval Schedule 3 condition 26*** A Water Management Plan (including soil management) was prepared in Aug 2013 and submitted to the DP&I.	Compliant
16.4	Noise and Blast Management Plan. (Incorporating a blast and noise monitoring component.)	Within 4 months of the receipt of project approval.	• Noise Management Plan, Nov 2013 • Blast Management Plan, Oct 2013	***See Project Approval Schedule 3 condition 16*** A Noise Management Plan and Blast Management Plan were prepared in Aug 2013 and submitted to the DP&I.	Compliant
16.5	Air Quality Management Plan. (Incorporating an air quality monitoring component.)	Within 4 months of receipt of project approval.	• Air Quality Management Plan, Oct 2013	***See Project Approval Schedule 3 condition 20*** A Transport Management Plan was prepared in Aug 2013 and submitted to the DP&I.	Compliant
16.6	Transport Management Plan.	Within 4 months of receipt of project approval.	• Transport Management Plan, Oct 2013	***See Project Approval Schedule 3 condition 44*** A Transport Management Plan was prepared in Aug 2013 and submitted to the DP&I.	Compliant
16.7	Landscape Management Plan. (Incorporating a Vegetation Management Plan for site rehabilitation and the on-site Biodiversity offset.)	Within 12 months of the receipt of project approval.	• Landscape Management Plan, Jan 2014	***See Project Approval Schedule 3 condition 57*** The draft Landscape Management Plan (dated February 2014) had been prepared for submission to the DP&I.	In progress
16.8	Extraction Management Plan (for operations within 5 vertical metres of the Great North Coal Seam).	Prior to commencing any extraction within 5 vertical metres of the Great Northern Coal Seam. Within 4 months of	• Lower Level Extraction Plan, Jan 2014	***See Project Approval Schedule 3 condition 4*** A draft Lower Level Extraction Plan was prepared (dated January 2014) for submission to the D-G by 22 February 2014. Mining Operation Services (MOS) was and G E Holt & Associates (GHA) prepared the draft document for the Teralba Quarry, particularly with regard to drill, blast and extraction processes above under-ground workings, and management of spontaneous combustion and gas hazards	In progress
16.9	Heritage Management Plan.	Within 4 months of the receipt of project approval.	• Aboriginal Heritage Management Plan, Aug 2013	***See Project Approval Schedule 3 condition 49*** An Aboriginal Heritage Management Plan was prepared in August 2013 and submitted to DP&I.	In progress
16.10	Annual Environmental Management Report (AEMR).	Annually (by 31 March each year covering the previous calendar year) .		***Refer to Project Approval Schedule 5 condition 4***	In progress
16.11	Hydrocarbon Management Plan. (Incorporating the storage and use of fuel and spill management.)	Within 6 months of receipt of approval.	• Water Management Plan, Aug 2013	The management of hydrocarbon storage and use on site (including spill management) were included in the Water Management Plan section 6.2.	Compliant
16.12	Annual Production Statistics to the DTIRIS	Annually			Noted

SoC No.	Action	Timing	Verification	Comment	Compliance
	(Division of Resources and Energy).	(by 31 July).			
16.13	Geotechnical Assessments and relevant design drawings for site structures and buildings (for submission to the Mines Subsidence Board).	Prior to construction of site infrastructure and buildings.		No buildings or structures had been constructed prior to this audit so no design drawings for site structures and buildings (for submission to the Mines Subsidence Board) had been required.	Noted
Ensure planning is undertaken sufficiently ahead of quarry closure to achieve a smooth transition to the subsequent land uses					
16.14	Prepare a Quarry Closure and Final Land Use Plans for the land within the Project Site that is to be developed for purposes other than nature conservation. The Plans would be prepared in consultation with the Lower Macquarie City Council.	3 years prior to cessation of extraction north of Rhondda Road (approximately 2031) and south of Rhondda Road (approximately 2039).			Not yet activated

Independent Environmental Audit – Teralba Quarry
February 2014
Attachment 3 - Environment Protection Licence No. 0536
Notice of Variation (Draft) EPL 0536, dated 7 February 2014
Attachment 3 - Environment Protection Licence No. 0536

Attachment 3 - Environment Protection Licence No. 0536

Notice of Variation Draft EPL 0536, dated 7 February 2014

Condition No.	EPL Condition	Verification	Comment	Compliance
1	**Administrative Conditions**			
A1	**What the Licence authorises and regulates**			
A1.1	This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation. Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition. **Scheduled Activity** / **Fee Based Activity** / **Scale** Crushing Grinding or Separating / Crushing, Grinding or Separating / >500000 to 20000000 T processed Extractive Industries / Land Based extractive activity / >500000 to 20000000 T extracted, processed or stored			Noted
A2	**Premises or plant to which the licence applies**			
A2.1	The licence applies to the following premises: Metromix Quarries, Rhondda Road, Teralba NSW 2284 Lot 1 DP 224037, Lot 2 DP224037			Noted
A2.2	The licence does not apply to the area of land detailed in the survey map titled "Plan showing environment protection licence within Lot 1 DP234037 of Rhondda Road, Teralba" 19 January 2009 and filed in LIC09/705. This area of land is subject to a different licence.			Noted
A3	**Information supplied to the EPA**			
A3.1	Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence. In this condition the reference to "the licence application" includes a reference to: a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.			Noted
2	**Discharges to Air and Water and Applications to Land**			
P1	**Location of monitoring/discharge points and areas**			

Independent Environmental Audit – Teralba Quarry — February 2014

Condition No.	EPL Condition			Verification	Comment	Compliance
P1.1	The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point. Air			• Air Quality Monitoring Results 2004 to 2013	The air quality monitoring conducted for the Teralba Quarry between February 2013 and January 2014 has involved dust deposition gauges at: • Hillside Crescent – EPL identification No. 1; • Rodgers Street – EPL identification No. 8; • Rhondda Road – EPL identification No. 9; • Margaret Street - EPL identification No. 10; and • Myrtle Street - EPL identification No. 11. The installation of the high volume air sampler (HVAS) had not occurred at the date of this audit as the location had not been agreed with a landowner and EPA approval of the location is required when an agreement re the location is finalised.	Compliant In progress
	EPA No.	Type of Monitoring Point	Location Description			
	1	Dust deposition	Dust gauge located outside the premises boundary, labelled as "EPL1-Hillside" in Figure B titled "Surrounding Residences and Air Quality Monitoring Locations" attached to correspondence 20 Aug 2013 (EPA Ref: DOC13/45175			
	3	High Volume Air Sampler PM_{10}	HVAS located outside the premises boundary, labelled as "HVAS" in Figure B titled "Surrounding Residences and Air Quality Monitoring Locations" attached to correspondence 20 Aug 2013 (EPA Ref: DOC13/45175			
	8	Dust deposition	Dust gauge located outside the premises boundary, labelled as "EPL2-Rodgers" in Figure B titled "Surrounding Residences and Air Quality Monitoring Locations" attached to correspondence 20 Aug 2013 (EPA Ref: DOC13/45175			
	9	Dust deposition	Dust gauge located outside the premises boundary, labelled as "EPA3-Rhondda" in Figure B titled "Surrounding Residences and Air Quality Monitoring Locations" attached to correspondence 20 Aug 2013 (EPA Ref: DOC13/45175			
	10	Dust deposition	Dust gauge located outside the premises boundary, labelled as "EPL4-Margaret" in Figure B titled "Surrounding Residences and Air Quality Monitoring Locations" attached to correspondence 20 Aug 2013 (EPA Ref: DOC13/45175			
	11	Dust deposition	Dust gauge located outside the premises boundary, labelled as "EPL5-Myrtle" in Figure B titled "Surrounding Residences and Air Quality Monitoring Locations" attached to correspondence 20 Aug 2013 (EPA Ref: DOC13/45175			

Attachment 3 - Environment Protection Licence No. 0536

Condition No.	EPL Condition	Verification	Comment	Compliance
P1.2	The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.			Noted
P1.3	The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.			Noted
	Water and Land		Water monitoring conducted for the Teralba Quarry site currently includes: • Overflow point from the Mine Adit Dam labelled as "3" in Figure C titled "Water monitoring" – EPA Identification No. 4 • Overflow point from Dam B labelled as "4" in Figure C titled "Water monitoring"– EPA Identification No. 5 EPA monitoring points 6 and 7 are in the Northern Extension Area and as the Mid Pit has been mined and large Dam K and Dam J catch the surface water, no water has been released and therefore no monitoring has occurred.	Compliant
	EPA No. / Type of Monitoring Point / Location Description 4 – Discharge to waters. Water quality monitoring – Overflow point from the Mine Adit Dam labelled as "3" in Figure C titled "Water monitoring" attached to correspondence dated 20 August 2013 (EPA Ref: DOC13/45175). 5 – Discharge to waters. Water quality monitoring – Overflow point from Dam B labelled as "4" in Figure C titled "Water monitoring" attached to correspondence dated 20 August 2013 (EPA Ref: DOC13/45175). 6 – Wet weather discharge to waters. Water quality monitoring. – North-western boundary of premises into unnamed north-western drainage line labelled as "5" in Figure C titled "Water Monitoring" attached to correspondence dated 20 August 2013 (EPA Ref: DOC13/45175). 7 – Wet weather discharge to waters. Water quality monitoring. – North-eastern boundary of premises into north-eastern drainage line labelled as "6" in Figure C titled "Water Monitoring" attached to correspondence dated 20 August 2013 (EPA Ref: DOC13145175).			
3	**Limit Conditions**			
L1	**Pollution of Waters**			
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	• *Protection of the Environment Operations Act* , section 120 , 1997		Noted
L2	**Concentration Limits**			
L2.1	For each monitoring/discharge point or utilisation area specified in the tables below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.			Noted
L2.2	Where a quality limit is specified in the table, the specified			Noted

<table>
<tr><th>Condition No.</th><th>EPL Condition</th><th>Verification</th><th>Comment</th><th>Compliance</th></tr>
<tr><td></td><td>percentage of samples must be within the specified ranges.</td><td></td><td></td><td></td></tr>
<tr><td>L2.3</td><td>To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the tables.</td><td></td><td></td><td>Noted</td></tr>
<tr><td>L2.4</td><td>Water and/or Land Concentration Limits
<table><tr><th>Pollutant</th><th>Units of Measure</th><th>100%ile concentration limit</th></tr><tr><td>pH</td><td>pH units</td><td>6.5 – 8.5</td></tr><tr><td>Total Suspended Solids (TSS)</td><td>mg/L</td><td>50</td></tr></table></td><td></td><td>Water monitoring results from the EPA approved monitoring point 4 conducted during 2013 indicated compliance with the concentration limits in condition L2.4.
Water monitoring results from the EPA approved monitoring point 5 conducted during November 2013, exhibited non-compliance with the TSS concentration limits in condition L2.4. The measured TSS concentrations after heavy rainfall of 132mm on 18 November and 29mm on 19 November resulted in TSS levels of 293mg/l and 228 mg/l respectively, for water from Dam D flowing over the spillway to dams C and B.</td><td>Compliant
Non-complaint</td></tr>
<tr><td>L3</td><td>Volume and Mass Limits</td><td></td><td></td><td></td></tr>
<tr><td></td><td>For each discharge point or utilisation area specified below (by a point number), the volume/mass of:
a) liquids discharged to water; or;
b) solids or liquids applied to the area;
must not exceed the volume/mass limit specified for that discharge point or area.
<table><tr><th>Point</th><th>Units of Measure</th><th>Volume/Mass Limit</th></tr><tr><td>4</td><td>Kilolitres/day</td><td>25</td></tr></table></td><td></td><td>Water flow from Mine Adit Dam A release point 4 is continuously monitored to satisfy the volume limit specified in condition L3.</td><td>Compliant</td></tr>
<tr><td>L4</td><td>Waste</td><td></td><td></td><td></td></tr>
<tr><td>L4.1</td><td>The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.
Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.
Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.
<table><tr><th>Code</th><th>Waste</th><th>Description</th><th>Activity</th></tr><tr><td>NA</td><td>General or Specific exempted waste</td><td>Waste that meets all the conditions of resource under Clause 92A of the "POEO (Waste) Regulation 2005</td><td>As specified in each particular resource recovery exemption</td></tr></table></td><td></td><td>Project Approval Schedule 2 condition 9 states – "The Proponent shall not receive on site more than 120 tonnes of recycled concrete per day or stockpile more than 2,500 tonnes of concrete material on the site".

No concrete for recycling has been received on the Teralba Quarry site since July 2013.

The area of the site that has received the concrete waste is licensed to the LMCC and 30,000t is in stock waiting to be processed by the LMCC.</td><td>Compliant
Noted</td></tr>
</table>

<table>
<tr><th>Condition No.</th><th>EPL Condition</th><th>Verification</th><th>Comment</th><th>Compliance</th></tr>
<tr><td></td><td>This condition does not limit any other conditions in this licence.</td><td></td><td></td><td></td></tr>
<tr><td>L5</td><td>Noise Limits</td><td></td><td></td><td></td></tr>
<tr><td>L5.1</td><td>The licensee must ensure that noise generated by the activities within the premises do not exceed the following criteria measured by dB(A) at any residence or privately owned land.
<table>
<tr><th>Location</th><th>Day Shoulder 6am to 7am</th><th>Day 7am to 6pm</th><th>Evening 6pm to 10pm</th><th>Night 10pm -6pm</th></tr>
<tr><td></td><td>LA eq(15min)</td><td>LA eq(15min)</td><td>LA eq(15min)</td><td>LA eq(15min)
LA eq(15min)</td></tr>
<tr><td>EPL-A 22 Awaba St Teralba</td><td>38</td><td>38</td><td>37</td><td>35
45</td></tr>
<tr><td>EPL-B 153 Railway St Teralba</td><td>42</td><td>46</td><td>36</td><td>35
45</td></tr>
<tr><td>EPL-C 8 Rhondda Rd Teralba</td><td>42</td><td>42</td><td>35</td><td>35
45</td></tr>
<tr><td>EPL-D 26 Rhondda Rd Teralba</td><td>35</td><td>35</td><td>35</td><td>35
45</td></tr>
<tr><td>EPL-E 57 Victoria Ave Teralba</td><td>35</td><td>35</td><td>35</td><td>35
45</td></tr>
<tr><td>EPL-F 63 Victoria Ave Teralba</td><td>35</td><td>35</td><td>35</td><td>35
45</td></tr>
<tr><td>EPL-H 52 School Rd Teralba</td><td>37</td><td>38</td><td>38</td><td>35
45</td></tr>
</table>
Note: The licensee may provide to the EPA written evidence of any agreement with a landholder which is subject to the above noise limits. The written evidence may be submitted with a licence variation to remove the landholder from the above table.</td><td></td><td>The Project Approval Schedule 3 condition 5 provides the noise criteria for the same residences on privately-owned land.

The noise criteria are the same as those proposed in this Variation to the EPL dated 7 February 2014 except for EPL-F 63 Victoria Avenue.</td><td>Noted</td></tr>
<tr><td>L5.2</td><td>The licensee must comply with the operating hours set out in the following table:
<table>
<tr><th>Day</th><th>Receipt of Concrete, VENM or ENM</th><th>Loading and Dispatch of Quarry Trucks</th><th>Extraction and Processing</th></tr>
<tr><td>Mon to Fri</td><td>1am - 5p m</td><td>4am Mon to midnight Fri</td><td>7am - 7pm</td></tr>
<tr><td>Saturday</td><td>7am – 2pm</td><td>Midnight Fri to 6pm Sat</td><td>7am – 2pm</td></tr>
<tr><td>Sunday and</td><td>None</td><td>None</td><td>None</td></tr>
</table></td><td></td><td></td><td>Noted</td></tr>
</table>

Condition No.	EPL Condition	Verification	Comment	Compliance
	Public Holidays *Note: Maintenance activities may occur at any time provided they are inaudible at privately-owned residence*			
L5.3	The noise limits set out in conditions L4.1 apply under all meteorological conditions except for any one of the following: (a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or (b) Stability category F temperature inversion conditions and wind speeds greater the 2 metres/second at 10 metres above ground level; or (c) Stability category G temperature inversion conditions.			Noted
L5.4	For the purpose of condition L4.3: (a) the meteorological data to be used for determining meteorological conditions is the data recorded at the meteorological station identified in this licence as EPA Identification Point W1. (b) Stability category temperature inversion conditions are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the *NSW industrial Noise Policy* (EPA 2000) *Note: The weather station must be designed, commissioned and operated in a manner to obtain the necessary parameters required under the above condition.*	• *NSW industrial Noise Policy* (EPA 2000) Appendix E	Metromix installed an automated meteorological station on-site, located 70m north of Rhondda Road adjacent to the access road to the Northern Extension Area (identified as EPA Point W1).. The station complies within the requirements in the "Approved Methods for Sampling of Air Pollutants in NSW" and the NSW industrial Noise Policy (EPA 2000). The station does not currently provide the sigma-theta stability category temperature inversion conditions referred to in Part E4 of Appendix E to the *NSW industrial Noise Policy* (EPA 2000).	Noted
L5.5	For the purpose of determining the noise generated at the premises the licensee must use a Class 1 or Class 2 noise monitoring device as defined by AS IEC61672.1 and AS IEC61672.2-2004, or other noise monitoring equipment accepted by the EPA in writing.			Noted
L5.6	To determine compliance: 1. With the LAeq(15 min) noise limits in condition L4.1, the licensee must locate noise monitoring equipment: (a) within 30 metres of a dwelling facade (but not closer than 3 metres) where any dwelling on the property is situated more than 30 metres from the property boundary that is closest to the premises; (b) approximately on the boundary where any dwelling is situated 30 metres or less from the property boundary that is closest to the premises, or, where applicable, (c) within approximately 50 metres if the boundary of a national park or nature reserve. 2. With the LA1(1 minute) noise limits in condition L4.1, the noise monitoring equipment must be located within I metre of a dwelling facade. 3. With the noise limits in condition L4.1, the noise monitoring equipment must be located: (a) at the most affected point at a location where there is no dwelling at the location, or			Noted

Condition No.	EPL Condition	Verification	Comment	Compliance
	(b) at the most affected point within an area at a location prescribed by conditions L4.6 1(a) or L4.6 1(b).			
L5.7	A non-compliance of condition L4.1 will still occur where noise generated from the premises in excess of the appropriate limit is measure: • at a location other than an area prescribed by conditions L4.6 1(a) and L4.6 1(b), and /or • at a point other than the most affected point at a location.			Noted
L5.8	For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.	• NSW Industrial Noise Policy EPA, 2000		Noted
L6	**Blasting**			
L6.1	Blasting in or on the premises must only be carried out between 1000 hours and 1600 hours Monday to Friday. Blasting in or on the premises must not take place on weekends or Public Holidays.		Blasting at the Teralba Quarry is only be carried out between 1000 hours and 1600 hours Monday to Friday. No blasting occurs on weekends or Public Holidays.	Compliant
L6.2	The airblast overpressure level from blasting operations at the premises must not exceed 120dB (Lin Peak) at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.		No blast monitoring during 2013 recorded overpressure results greater than the 120dBL criteria.	Compliant
L6.3	The airblast overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.		No blast monitoring during 2013 recorded overpressure results greater than the allowable criteria of 115dBL.	Compliant
L6.4	Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10mm/sec at any time at any noise sensitive location. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.		No blast monitoring during 2013 recorded vibration results greater than the 10mm/s criteria.	Compliant
L6.5	Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec at any time at any noise sensitive location for more than five percent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded. ***Note:*** *Noise sensitive location includes any residence, hospital, school, childcare centre, theatre, place of worship, other similar building occupied by people, and any land within 30 metres of any afore-mentioned building.* A noise sensitive location excludes: a) any of the afore-mentioned buildings or land that is the subject of a private agreement between the owner of the		No blast monitoring during 2013 recorded vibration results greater than the allowable criteria of 5mm/s.	Compliant

Condition No.	EPL Condition	Verification	Comment	Compliance
	noise sensitive site and the licensee as to an alternative airblast overpressure or ground vibration level; or b) any premises owned by the licensee.			
L6.6	The licensee is only permitted to carry out one (1) blast per day at the premises, unless an additional blast is required following a blast misfire.	• Blast Monitoring Data, 2013	Blasts at the Teralba Quarry are only conducted once a day, unless there is a blast misfire.	Compliant
L7	**Potentially Offensive Odour**			
L7.1	No condition of this licence identifies a potentially offensive odour for the purposes of Section 129 of the Protection of the Environment Operations Act 1997.			Noted
L7.2	The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.		The activities undertaken by Metromix at the Teralba Quarry do not result in the generation of any offensive odour.	Compliant
4	**Operating Conditions**			
O1	**Activities Must be Carried Out in a Competent Manner**			
O1.1	Licensed activities must be carried out in a competent manner. This includes: (a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and (b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.			Noted
O2	**Maintenance if Plant and Equipment**			
O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: (a) must be maintained in a proper and efficient condition; and (b) must be operated in a proper and efficient manner.		All equipment and vehicles operated at the Teralba Quarry by Metromix are maintained in accordance with the manufacturer's specifications at the on-site workshops.	Compliant
O3	**Dust**			
O3.1	The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	• Air Quality Management Plan, Oct 2013		Noted
5	**Monitoring and Recording Conditions**			
M1	**Monitoring Records**			
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.			Noted
M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.		Records and documentation associated with the operation of the Teralba Quarry is kept in a legible form and is available on request from the Site Manager. All records will be kept for a minimum of 4 years and environmental documents and monitoring are available on the Metromix website.	Noted
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample		Monitoring records for samples collected from the Teralba Quarry to satisfy the requirements of this EPL include the date, time, monitoring point identification and name of the person who collected the sample.	Compliant Ongoing

Condition No.	EPL Condition	Verification	Comment	Compliance
M2	**Requirement to Monitor Concentration of Pollutants Discharged**			
M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:			Noted
M2.2	**Air Monitoring Requirements** **POINTS 1,8,9,10,11** Pollutant: Particulates – deposited matter; Units of Measure: g/m²/mth; Frequency: Once/mth; Sampling Method: AM-19 **POINT 3** Pollutant: PM_{10}; Units of Measure: µg/m³; Frequency: Every 6 days; Sampling Method: AM-18		Air monitoring for points 1, 8, 9, 10 and 11 (deposited dust) have been conducted in accordance with the EPL condition M2.2 requirements. Point 3 monitoring for PM10 has not commenced due to issues related to agreement for the location of the High Volume Air Sampler. When the location agreement has been reached Metromix will advise the EPA to obtain approval of the location prior to installation of the HVAS.	Compliant In progress
M2.3	**Water and/ or Land Monitoring Requirements** **Point 4** Pollutant: pH; Units of Measure: pH units; Frequency: Once a mth (min of 4 wks); Sampling Method: Grab sample Pollutant: TSS; Units of Measure: mg/L; Frequency: Once a mth (min of 4 wks); Sampling Method: Grab sample **Point 5** Pollutant: pH; Units of Measure: pH units; Frequency: During any discharge; Sampling Method: Grab sample Pollutant: TSS; Units of Measure: mg/L; Frequency: During any discharge; Sampling Method: Grab sample **Point 6 and 7** Pollutant: pH; Units of Measure: pH units; Frequency: Special frequency 1; Sampling Method: Grab sample Pollutant: TSS; Units of Measure: mg/L; Frequency: Special frequency 1; Sampling Method: Grab sample Pollutant: Conductivity; Units of Measure: µS/cm; Frequency: Special frequency 1; Sampling Method: Grab sample		Water monitoring conducted for the Teralba Quarry site currently includes: • EPA Identification No. 4 - Overflow point from the Mine Adit Dam labelled as "3" in Figure C titled "Water monitoring"; and • EPA Identification No. 5 - Overflow point from Dam B labelled as "4" in Figure C titled "Water monitoring"; in accordance with EPL condition M2.3. EPA monitoring points 6 and 7 are in the Northern Extension Area. No water has been released from Dams J or Dam K, so no water monitoring has been required.	Compliant
M2.4	For Special Frequency 1 the licensee must monitor within 8 hours of commencing discharge and weekly thereafter during discharge.			Noted
M3	**Testing Methods – Concentration Limits**			
M3.1	Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with: a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or b) if no such requirement is imposed by or under the Act, any			Noted

Condition No.	EPL Condition	Verification	Comment	Compliance
	methodology which a condition of this licence requires to be used for that testing; or c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.			
M3.2	Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted. *Note:* *The Protection of the Environment Operations (Clean Air) Regulation 2010 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".*			**Noted**
M4	**Environmental Monitoring – requirement to monitor noise**			
M4.1	To determine compliance with condition L4.1, attended noise monitoring must be undertaken in accordance with conditions L4.5 and L4.6, and (a) at each one of the locations listed in condition L4.1; (b) occur annually within the reporting period of the Environment Protection Licence; (c) occur during each day, evening and night period as defined in the NSW Industrial Noise Policy (EPA 2000) for a minimum of 1.5 hours during the day; 30 minutes during the evening; and 1 hours during the night, and (d) occur for three (3) consecutive days.			**Noted**
M5	**Weather Monitoring**			
M5.1	For each monitoring point specified below, this licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns: **Point W1** **Parameter / Units of Measure / Frequency / Averaging Period / Method** Rainfall / mm / Continuous / 24 hour / AM-4 Wind direction / ° / Continuous / 1 hour / AM-2 & AM-4 Wind speed / m/s / Continuous / 1 hour / AM-2 & AM-4 Air temp / °C / Continuous / 1hour / AM-4 Relative humidity / % / Continuous / 1hour / AM-4 Sigma-theta / σ / Continuous / 15 minutes / AM-2 & AM-4		Metromix have installed an automated meteorological station on-site, located 70m north of Rhondda Road adjacent to the access road to the Northern Extension Area. The meteorological station has been sited on area that would satisfy the criteria for the location of a weather station as described in AS 2922:1987 Ambient Air - Guide for the Siting of Sampling Units (NSW DECCW Method AM-1), and the NSW DECCW Approved methods for the sampling and analysis of air pollutants in NSW (DECC, 2005). The station complies within the requirements in the "Approved Methods for Sampling of Air Pollutants in NSW" Table 1. The meteorological station records: • temperature; • solar radiation; • rainfall; dew point • air pressure; and	**Compliant**

Condition No.	EPL Condition	Verification	Comment	Compliance
			and humidity • fire danger index	
M5.2	For the purpose of condition M5.1, Point W1 refers to the meteorological station established on the premises.			Noted
M5.3	The licensee must fully comply with condition M5 by 31 July 2013.			Noted
M6	**Recording of Pollution Complaints**			
M6.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.		All complaints received by Metromix in relation to the operation and activities of the Teralba Quarry are recorded on the Complaints register and available on the company website.	Compliant
M6.2	The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.			
M6.3	The record of a complaint must be kept for at least 4 years after the complaint was made.			Noted
M6.3	The record must be produced to any authorised officer of the EPA who asks to see them.			Noted
M7	**Telephone Complaints Line**			
M7.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.		Metromix have an operating telephone complaints line for receiving any complaints from the public in relation to activities conducted at the premises or by the vehicle or mobile plant associated with the Teralba Quarry.	Compliant
M7.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.		The complaints line number is provided on the Metromix website and provided on any community newsletters and to the Community Consultation Committee.	Compliant
M7.3	The preceding two conditions do not apply until 3 months after: a) the date of the issue of this licence or b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that			Noted

Condition No.	EPL Condition	Verification	Comment	Compliance
	regulation.			
M8	**Requirement to Monitor Volume or Mass**			
M8.1	For each discharge point or utilisation area specified below, the licensee must monitor: (a) the volume of liquids discharged to water or applied to the area; (b) the mass of solids applied to the area; (c) the mass of pollutants emitted to the air; (d) at the frequency and using the method and units of measure, specified below. **Points 4 and 5** Frequency: Continuous during discharge; Units of Measure: Kilolitres/ day; Sampling Method: Flow meter and continuous logger		The flow rate and volume of any water discharged from Mine Adit Dam A to the environment is monitored by a continuous logger.	Compliant
M9	**Blasting**			
M9.1	To determine compliance with conditions L5.2, L5.3, L5.4 and L5.5: a) Airblast pressure and ground vibration must be measured at any residence or noise sensitive location that is likely to be most affected and is not owned by the licensee or subject of a private agreement between the owner of the residence or noise sensitive site and the licensee as to an alternative blasting level - for all blasts carried out in or on the premises; and b) Instrumentation used to measure the airblast overpressure and ground vibration must meet the requirements of AS2187.2-2006.	• Blast Management Plan, section 9.2, Oct 2013	Teralba Quarry blasts are monitored for blast overpressure and vibration at fixed blast monitors in accordance with the approved locations identified in the Blast Management Plan.	Compliant
6	**Reporting Conditions**			
R1	**Annual Return Documents**			
R1.1	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: (a) a Statement of Compliance; and (b) Monitoring and Complaints Summary. At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.	• Notice of Variation 1152791 - EPL 536, 7 Feb 2014	The Annual Return for the Notice of Variation to EPL 0536 advised on 7 February 2014, is due for submission to the EPA on 1 June.	In progress
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below. *Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.*			Noted

Condition No.	EPL Condition	Verification	Comment	Compliance
R1.3	Where this licence is transferred from the licensee to a new licensee: (a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and (b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period. *Note: An application to transfer a licence must be made in the approved form for this purpose.*			Not applicable
R1.4	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: (a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or (b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.			Not applicable
R1.5	The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').			Noted
R1.6	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA			Noted
R1.7	Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: (a) the licence holder; or (b) by a person approved in writing by the EPA to sign on behalf of the licence holder.			Noted
R1.8	A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.			Noted
R2	**Notification of Environmental Harm**			
	Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.			
R2.1	Notifications must be made by telephoning the Environment Line service on 131 555.			Noted
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.			Noted

Independent Environmental Audit – Teralba Quarry — February 2014

Condition No.	EPL Condition	Verification	Comment	Compliance
R3	**Written Report**			
R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.			Noted
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.			Noted
R3.3	The request may require a report which includes any or all of the following information: a) the cause, time and duration of the event; b) the type, volume and concentration of every pollutant discharged as a result of the event; c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort; e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants; f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and g) any other relevant matters.			Noted
R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.			Noted
R4	**Other Reporting Conditions**			
	Noise Monitoring Report			
R4.1	The licensee must submit to the EPA a noise			Not yet

Attachment 3 - Environment Protection Licence No. 0536 — XV

Condition No.	EPL Condition	Verification	Comment	Compliance
	compliance assessment report at the end of each reporting period. The report must be submitted with the Environment Protection Licence Annual Return. The report must be prepared by a suitably qualified and experienced acoustical consultant which: (a) details the noise monitoring undertaken in accordance with condition M4; (b) assess compliance with noise limits presented in condition L5.1, and (c) outlines any management actions taken within the monitoring period to address any exceedences of limits contained in condition L5.1.			activated
7	**General Conditions**			
G1	**Copy of Licence to be kept on the Premises**			
G1.1	A copy of this licence must be kept at the premises to which the licence applies.			Compliant
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.			Noted
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.			Noted
8	**Pollution Studies and Reduction Programs**			
U1	**Assessment of Metals Leaving the Premises**			
U1.1	At points 4 and 5 the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1 of Table U1.1. The licensee must use the sampling method, units of measure, and sample frequency, specified opposite in the other columns. Upon completion of the first 6 months of monitoring all results must be submitted to the EPA Regional Manager Hunter at PO Box 488G Newcastle 2300, to be reviewed. The metals that are not detected during the first 6 months of monitoring may be removed from this PRP on submission of a variation application by the licensee. To avoid any doubt if no variation is granted all metals must be monitored of the full two years. Upon completion of 24 months of monitoring for metals the licensee must within 2 (two) months conduct an assessment of metals detected in the discharges in accordance with ANZECC water quality guidelines and provide this assessment and all sample results from the study to the EPA Regional Manager Hunter within 1 (one) month. Note: The EPA may use this assessment to vary the EFL to include metal discharge limits if the assessment in accordance with ANZECC criteria indicates limits may need to be required to protect receiving waters.	• EPL Variation condition U1.1, 7 Feb 2014. • Teralba Quarry Water Monitoring Results, Sep to Dec 2013	Teralba Quarry water monitoring of EPA approved monitoring points 4 and 5 (i.e. Mine Adit Dam A and discharge at the end of pipe from Dam B) has included the analysis of the concentration of each pollutant specified in Column 1 of Table U1.1.	In progress

Appendix 1 Consultation Letters to Relevant Agencies

TREVOR BROWN & ASSOCIATES

Applied Environmental Management Consultants

TBA Ref :Teralba/14/02

28 February 2014

Environmental Management
ISO14000 EMS development
EMP preparation
EMS Implementation
Environmental audits
Due Diligence Audits
Compliance Audits
Environmental Risk Assessment
Environmental Training
Environmental Workshops
Environmental Project Management

for
Mining
Construction
Industry
Government
Small-Medium Enterprises

Division of Resources and Energy
P O Box 344
HRMC NSW 2310

Attention: Sarah Jardine A/Regional Environmental Officer

Dear Sarah

Independent Environmental Audit – Teralba Quarry

I have been endorsed as Lead Auditor by the Department of Planning and Infrastructure (DP&I) on16 January 2014, in accordance with Project Approval 10_0183 Schedule 5 Condition 9 for the conduct of an Independent Environmental Audit of Teralba Quarry Extensions as determined by the Department of Planning and Infrastructure (DP&I) on16 January 2014.

The independent audit will assess the current environmental status of the development of the Teralba Extensions and compliance with the requirements of Project Approval 10_0183, Environmental Protection Licence 0536, Water Bore Licence 20BL173206 and the project management plans prepared to satisfy the conditions of the Project Approval. The audit will also involve a review of the adequacy of strategies, plans and programs prepared under the abovementioned approvals and, where necessary, recommend appropriate measures or actions to improve the environmental performance of the project.

The audit will be comprehensive however, if there are any particular environmental aspects that you would like the audit to take into consideration, please contact me via email before the 6 March 2014.

Yours sincerely 28 February 2014

Trevor Brown
Principal Environmental Management Auditor

Trevor Brown & Associates
42 Skiff Street Vincentia NSW 2540
Mobile 0409 053 031
Email: tebrown@bigpond.com

TREVOR BROWN & ASSOCIATES

Applied Environmental Management Consultants

TBA Ref :Teralba/14/02

28 February 2014

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EMP preparation
EMS Implementation
Environmental audits
Due Diligence Audits
Compliance Audits
Environmental Risk Assessment
Environmental Training
Environmental Workshops
Environmental Project Management

for
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Small-Medium Enterprises

Lake Macquarie City Council
Box 1906
HRMC NSW 2310

Attention:
Dr Cameron Jennings – Senior Sustainability Officer

Dear Dr Jennings

Independent Environmental Audit – Teralba Quarry

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Attention:
Chris Baker – Quarry

Dear Chris

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Attention:

Janine Koppel – Erosion and Sediment Control Officer

Dear Janine

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Attention:

Peter McMurray – Transportation Asset Planning Co-ordinator

Dear Peter

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Attention:

Stephanie King – Senior Waste Officer

Dear Stephanie

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Roads and Maritime Services
Locked Bag 2030
Newcastle NSW 2300

Attention: David Young Manager Land Use Hunter Region

Dear David

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