

Appendices

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- Appendix 1 2018 Internal Compliance Review (50 pages)
- Appendix 2 Monitoring Data and Records (94 pages)
- Appendix 3 2018 Kendall and Kendall Ecological
Services – Annual Nesting Box Inspection
(16 pages)
- Appendix 4 2018 T.E.N.T.A.C.L.E. Incorporated
Rehabilitation Report (22 pages)
- Appendix 5 2018 Community Consultative Committee
Meeting Minutes (8 pages)
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Appendix 1

2018 Internal Compliance Review







(Total No. of pages including blank pages = 50)



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Part 1 - Project Approval 10_0183

Colour Code for Compliance Assessment

-  Compliant
-  Compliant Ongoing / In Progress
-  Non-compliant
-  Administrative Non-Compliance
-  Noted / Not Applicable / Not Yet Applicable
-  Not Activated / Not Yet Activated

Part 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 must 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, in acting on this approval, must carry out the project: (a) in compliance with the conditions of this approval; (b) in accordance with the statement of commitments; and (c) in accordance with all written directions of the Secretary.	<ul style="list-style-type: none"> 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, and the Environmental Assessment for Modification 1, the conditions of Project Approval (as modified) and general layout of the project presented in Appendix 1 and Appendix 2 of the Project Approval.	Compliant Ongoing
2A.	The Proponent, in acting on this approval, must carry out the project: (a) generally in accordance with the EA; (b) generally in accordance with the EA (Mod 1); and (c) generally in accordance with the project layout. <i>Notes:</i> <ul style="list-style-type: none"> The general layout of the project is shown in Appendix 1 and Appendix 2. The statement of commitments is reproduced in Appendix 3. 			
3.	If there is any inconsistency between the documents identified in condition 2A, 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.	Consistent with the requirements of this approval, the Secretary may make written directions to the Proponent in relation to: (a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this approval, including those that are required to be, and have been, approved by the Secretary; and (b) the implementation of any actions or measures contained in any such document referred to in (a) above.			Noted

Condition No.	Project Approval condition	Verification	Comments	Compliance
4A.	The Proponent must comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of: (a) any strategies, plans, programs, reviews, audits, reports or correspondence submitted in accordance with this approval (including any stages of these documents); (b) any reviews, reports or audits commissioned by the Department regarding compliance with this approval; and (c) the implementation of any actions or measures contained in these documents.		Metromix has prepared and submitted the reports, strategies, plans, programs, reviews, audits required by the conditions of this Project Approval.	Compliant Ongoing
COMPLIANCE				
4B.	The Proponent must ensure that all employees, contractors and sub-contractors are made aware of, and instructed to comply with, the conditions of this approval relevant to activities they carry out in respect of the project.			Noted
LIMITS ON APPROVAL				
Quarrying Operations				
5.	The Proponent may carry out quarrying operations on the site until 31 December 2038. <i>Note: Under this approval, the Proponent is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Secretary. Consequently, this approval will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of the site and those undertakings have been carried out to a satisfactory standard.</i>			Noted
Extractive Material Limits				
6.	The Proponent must not carry out quarrying operations below 20m AHD in the Southern Extension Area or below 24 m AHD in the Mid Pit Extraction and Northern Extension Areas. <i>Note: This condition does not apply to the construction of any bores approved by NOW or pollution and sediment control structures described in the EA.</i>		Quarrying operations have not occurred to below 20m 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
7.	The Proponent must 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 January 2018 to December 2018 (approximately 615,000t).	Compliant
Extractive Material Transport				
8.	The Proponent must 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;	<ul style="list-style-type: none"> Teralba Truck Movements, January 2018 to December 2018 	Transport of extracted materials from the Teralba Quarry between January 2018 and December 2018 indicated: (a) less than 1 million tonnes of extracted material was transported from the site between January 2018 and December 2018 (b) laden trucks dispatched from the Teralba Quarry site did not exceed 326 on any day;	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance										
	(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.		(c) laden trucks travelling westwards along Rhondda Road did not exceed 241 per day or 20 per hour period; (d) laden trucks travelling eastwards through Teralba did not exceed 85 per day. (e) laden trucks have not travelled eastward through Teralba prior to 6 am; (f) un-laden trucks were not received via the Railway Street entrance between 6 pm and 7 am.											
9.	<p>The Proponent must shall limit the total hourly truck dispatch rates from the site to the levels shown in Table 1.</p> <p><i>Table 1 – Truck Dispatch Hours</i></p> <table><tr><th>Dispatch Period</th><th>Max Hourly Dispatch</th></tr><tr><td>6:00am – 7:00am</td><td>Up to 28 loaded trucks</td></tr><tr><td>7:00am – 6:00pm</td><td>Up to 20 loaded trucks</td></tr><tr><td>6:00pm – 5:00am</td><td>Up to 6 loaded trucks</td></tr><tr><td>5:00am – 6:00am</td><td>Up to 12 loaded trucks</td></tr></table> <p><i>Note: Dispatch times and maximum hourly rates westwards along Rhondda Road or eastwards through Teralba are further limited by condition 8 above.</i></p>	Dispatch Period	Max Hourly Dispatch	6:00am – 7:00am	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		Hourly dispatch rates were at or within project approval rates in 2018.	Compliant
Dispatch Period	Max Hourly Dispatch													
6:00am – 7:00am	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													
	Receival of Concrete, Virgin Excavated Natural Material and Excavated Natural Material													
10.	The Proponent must 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.		A total of 7 643.3t of concrete washout were imported to the pugmill area (the application area for EPL 13015) during the reporting period and 1 893.67t of concrete washout was processed into recycled concrete roadbase product. These levels remain consistent with approved operations.. No more than 2,500t of material is stored at the Quarry Site(separate to the area specified in EPA Licence No 13015 for the former Civil Lake site).	Compliant										
11.	The Proponent must 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 January 2018 to December 2018.	Compliant										
	SURRENDER OF CONSENTS													
12.	<p>By the end of December 2013, or as otherwise agreed by the Secretary, the Proponent must surrender the development consent (DA 130/42) for existing operations on the site in accordance with Section 104A of the EP&A Act.</p> <p><i>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.</i></p>	Letter to DP&I re Surrender of DA 130/42 , 23 Dec 2013	Metromix surrendered DA 130/42 on 23 December 2013.	Compliant										

Condition No.	Project Approval condition	Verification	Comments	Compliance
	STRUCTURAL ADEQUACY			
13.	<p>The Proponent must ensure that any new buildings and structures, and any alterations, or additions to existing buildings and structures, are constructed:</p> <p>a) in accordance with the relevant requirements of the BCA; and</p> <p>b) to the satisfaction of the Subsidence Advisory NSW.</p> <p>Notes:</p> <ul style="list-style-type: none"> Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works. Part 8 of the EP&A Regulation sets out the requirements for the certification of the project. Under Section 15 of the Mine Subsidence Compensation Act 1961 the Proponent is required to obtain approval from the Subsidence Advisory NSW for the construction, erection or alteration of any improvements on the site. 		No new buildings were constructed on site between January 2018 and December 2018.	Not Applicable
	DEMOLITION			
14.	The Proponent must 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 January 2018 and December 2018.	Not Applicable
	PROTECTION OF PUBLIC INFRASTRUCTURE			
15.	<p>The Proponent must:</p> <p>(a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the project; and</p> <p>(b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the project.</p>		No public infrastructure was damaged or relocated as a result of the project between January 2018 and December 2018.	Not Activated
	PLANNING AGREEMENT			
16.	<p>Within 12 months of the date of this approval, unless otherwise agreed by the Secretary, the Proponent must 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.</p> <p>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 Secretary for resolution.</p>	<ul style="list-style-type: none"> Project Approval 10_0183, granted 22 Feb 2013 	<p>Metromix has 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.</p> <p>Metromix agreed to pay the Council the \$0.066/t/km plus rise and fall.</p>	Compliant
	ROAD MAINTENANCE			
17.	<p>During the life of the project, for each calendar year, the Proponent must 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:</p> <p>(a) based on weighbridge records of the quantity of quarry products transported from the site;</p> <p>(b) paid by the date required by the invoice issued by Council; and</p> <p>(c) increased over the life of the project in accordance with the CPI.</p>		Six monthly payments to council are in place and a voluntary planning agreement has been registered on the title.	Compliant Ongoing

Condition No.	Project Approval condition	Verification	Comments	Compliance
	OPERATION OF PLANT AND EQUIPMENT			
18.	The Proponent must ensure that all plant and equipment used at the site is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.		Metromix has 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 Secretary, the Proponent may submit any strategy, plan or program required by this approval on a progressive basis. <i>Notes:</i> <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Environmental Management Strategy, 2018 Air Quality Management Plan, 2013 Blast Management Plan, 2013 Noise Management Plan, 2018 Transport Management Plan, 2013 Waste Management Plan, Sep 2013 Water Management Plan, 2018 Landscape Management Plan 2014 Heritage Management Plan 2014 Lower Level Management Plan 2016 	<p>All Management Plans are reviewed on an annual basis.</p> <p>Metromix is currently in the process of updating all management plans for the operation. In accordance with the requirements of the Project Approval, these plans are required to be prepared in consultation with relevant Government departments and this process is under way.</p> <p>The Landscape Management Plan will be replaced by a Biodiversity and Rehabilitation Management Plan in accordance with Condition 60 of Schedule 3 of the Project Approval. This plan will be submitted to DPE for approval prior to 16 April 2019.</p> <p>Metromix is also in the process of undertaking an Aboriginal heritage monitoring program after which time the Heritage Management Plan will be updated (expected March 2019).</p>	Compliant Ongoing
	PRODUCTION DATA			
20.	The Proponent must: (a) provide annual quarry production data to DRG 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 for July 2017 to June 2018 was reported to the DRG and the data will be included in the Annual Review (see Appendix 1).	Compliant Ongoing
	SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS			
	IDENTIFICATION OF APPROVED LIMITS OF EXTRACTION			
1.	Prior to carrying out quarrying operations under this approval, the Proponent must: (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction within the Extraction Areas; and (b) submit a survey plan of these boundaries to the Secretary.	<ul style="list-style-type: none"> Boundary Survey Plan, Southern Extension, Moutrie Survey, Jun 2013 Compendium of Documents for DP&I, Sep 2013 	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 various activity areas.	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
2.	While ever quarrying operations are being carried out, the Proponent must 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.		<p>The boundaries of the approved limits of the Teralba Quarry lease activities have been marked with coloured poles for the various areas:</p> <ul style="list-style-type: none"> • White poles - Stage 1A, • Yellow poles – quarry extraction limits • Blue poles - Pugmill Area • Green poles – Downer EDI <p>Signage is to be placed on the posts to specifically identify each of the active areas of works within the Teralba Quarry lease boundaries.</p>	Compliant Ongoing
	EXTRACTION MANAGEMENT			
	Operating Conditions			
3.	<p>The Proponent must ensure that:</p> <p>(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</p> <p>(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.</p>	<ul style="list-style-type: none"> • 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 2016. 	<p>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.</p>	Noted
	Lower Level Extraction Management Plan			
4.	<p>The Proponent must 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 Secretary. This plan must:</p> <p>(a) be submitted for approval to the Secretary prior to undertaking any such quarrying operations and within 12 months of the date of this approval;</p> <p>(b) be prepared by suitably qualified persons approved by the Secretary;</p> <p>(c) provide for the achievement of the measures set out in condition 3 above;</p> <p>(d) describe the measures that would be implemented to ensure:</p> <ul style="list-style-type: none"> • 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; 	<ul style="list-style-type: none"> • Lower Level Extraction Plan, September 2016 • Teralba Quarry Extension Geotechnical Assessment, Mar 2006 • Preliminary comments on Quarry Operations – Interactions with On-site Coal Resource, 28 Nov 2012 	<p>A Lower Level Extraction Management Plan was completed in September 2016 and approved in November 2016. Extraction above the coal seam commenced in early 2017.</p>	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance																														
	<p>(e) include a Spontaneous Combustion Management Plan, which has been prepared in consultation with DRG and Oceanic Coal Pty Ltd, to manage the potential risks and impacts of spontaneous combustion or heating of coal, and which:</p> <ul style="list-style-type: none"> 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. <p>The Proponent must implement the plan as approved by the Secretary.</p>																																	
	NOISE																																	
5.	<p>The Proponent must ensure that the noise generated by the project does not exceed the criteria in Table 2 at any residence on privately-owned land.</p> <p><i>Table 2: Noise criteria dB(A)</i></p> <table border="1"> <thead> <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> </thead> <tbody> <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> </tbody> </table> <p><i>Notes:</i></p> <ul style="list-style-type: none"> 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. <p>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.</p>	Location	Day 6-7am	Day 7am-6pm	Evening 6-10pm	Night 10pm-6am	A	38	38	37	35	B	42	46	36	35	C	42	42	35	35	D, E, G, H, I	35	35	35	35	F	37	38	38	35	<p>Noise compliance reporting prepared by Spectrum Acoustics</p> <p>Landowner contracts</p>	<p>Noise monitoring was conducted for the Teralba Quarry in August and November 2018.</p> <p>Landowners at 8 Rhondda Rd (Location C) and 63 Victoria St (Location F) Teralba agreed not to continue monitoring at their address, however, reserve the right to request the re-instatement of noise monitoring if required.</p>	Compliant
Location	Day 6-7am	Day 7am-6pm	Evening 6-10pm	Night 10pm-6am																														
A	38	38	37	35																														
B	42	46	36	35																														
C	42	42	35	35																														
D, E, G, H, I	35	35	35	35																														
F	37	38	38	35																														

Condition No.	Project Approval condition	Verification	Comments	Compliance																
	Hours of Operation																			
6.	<p>The Proponent must comply with the operating hours set out in <i>Table 3: Operating Hours</i></p> <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> <p><i>Note: Maintenance activities may occur at any time provided they are inaudible at privately-owned residences.</i></p>	Day	Receipt of Concrete or VENM	Loading/Dispatch of trucks	Extraction & Processing Operations	Mon-Fri	7am – 5pm	4am Monday to Midnight Friday	7am – 7pm	Saturday	7am – 2pm	Midnight Friday to 6pm Saturday	7am – 2pm	Sundays and Public Holidays	None	None	None		All activities at the Teralba Quarry occurred within the approved operating hours during the period from 1 January 2018 to 31 December 2018.	Compliant
Day	Receipt of Concrete or VENM	Loading/Dispatch of trucks	Extraction & Processing Operations																	
Mon-Fri	7am – 5pm	4am Monday to Midnight Friday	7am – 7pm																	
Saturday	7am – 2pm	Midnight Friday to 6pm Saturday	7am – 2pm																	
Sundays and Public Holidays	None	None	None																	
	Operating Conditions																			
7.	<p>The Proponent must:</p> <p>(a) implement best practice noise management to minimise the construction, operational and traffic noise of the project;</p> <p>(b) minimise the noise impacts of the project during meteorological conditions when the noise limits in this approval do not apply;</p> <p>(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;</p> <p>(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 Secretary.</p>	<ul style="list-style-type: none">Noise Management Plan 2018	<p>The Noise Management Plan Section 8 outlines control measures to be implemented and describes the noise management practices to be implemented on the site:</p> <p>(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);</p> <p>(b) Section 8.5 addresses operational noise management under adverse weather conditions;</p> <p>(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.</p> <p>(d) Section 9 outlines Evaluation of Compliance</p>	Compliant																
	Noise Management Plan																			
	<p>The Proponent must prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be submitted for approval to the Secretary within 4 months of the date of this approval;</p> <p>(b) describe the measures that would be implemented to ensure:</p> <ul style="list-style-type: none">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; andcompliance with the relevant conditions of this approval; <p>(c) describe the proposed noise management system in detail; and</p>	<ul style="list-style-type: none">Noise Management Plan, 2018Letter from DP&I re Approval of Noise Management Plan, 16 Jan 2014	<p>An updated Noise Management Plan was approved on 2 October 2018.</p> <p>(a) The original Noise Management Plan was submitted to DP&I on 31 July 2013;</p> <p>(b) The 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.</p> <p>(c) The Noise Management Plan describes the overall noise management system</p>	Compliant																

Condition No.	Project Approval condition	Verification	Comments	Compliance												
	<p>(d) include a monitoring program that:</p> <ul style="list-style-type: none">• 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. <p>The Proponent must implement the plan as approved by the Secretary.</p>		<p>(d) Noise Management Plan Section 9 describes the Noise Monitoring Protocol and Evaluation of Compliance.</p> <p>(e) Noise Management Plan Section 9 addresses Corrective and Preventative Actions and Section 11 address Information and Communication and Incident Reporting.</p>													
	BLASTING															
	Blasting Criteria															
9.	<p>The Proponent must ensure that the blasting on the site does not cause exceedances of the criteria in Table 4.</p> <p><i>Table 4: Blasting criteria</i></p> <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></td><td>120</td><td>10</td><td>0%</td></tr><tr><td></td><td>115</td><td>5</td><td>5% of the total number of blasts over a 12 mth period</td></tr></table> <p>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.</p>	Location	Airblast Overpressure (dB(Lin Peak))	Ground Vibration (mm/s)	Allowable Exceedance		120	10	0%		115	5	5% of the total number of blasts over a 12 mth period		<p>18 blasts were conducted between January 2018 and December 2018 all of which were monitored. There were no recorded overpressure results greater than 115dB(L) and no vibration measurements recorded greater than 5mm/s.</p> <p>No agreements have been made with any relevant landowners in relation to blasting.</p>	Compliant
Location	Airblast Overpressure (dB(Lin Peak))	Ground Vibration (mm/s)	Allowable Exceedance													
	120	10	0%													
	115	5	5% of the total number of blasts over a 12 mth period													
	Blasting Hours															
10.	<p>The Proponent must 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 Secretary.</p>	<ul style="list-style-type: none">• Blast Monitoring Results Teralba Quarry, 2018 – Appendix 1	<p>All blasts conducted at the Teralba Quarry have occurred between 10:00am and 4:00pm, i.e. between 10:23am and 3.32pm.</p>	Compliant												
	Blasting Frequency															
11.	<p>The Proponent must not carry out more than 1 blast a day on site, unless an additional blast is required following a blast misfire.</p> <p><i>Note: A blast may involve a number of explosions within a short period, typically less than two minutes.</i></p>	<ul style="list-style-type: none">• Blast Monitoring Results Teralba Quarry, 2018 – Appendix 1	<p>All blast conducted in 2018 were single blasts.</p>	Compliant												

Condition No.	Project Approval condition	Verification	Comments	Compliance
	Property Inspections			
12.	<p>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 must:</p> <p>(a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:</p> <ul style="list-style-type: none"> 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 <p>(b) give the landowner a copy of the new or updated property inspection report.</p>		No blasting has occurred within 500m of any buildings and/or structures on privately owned land.	Not Activated
	Property Investigations			
	<p>If the owner of any privately-owned land claims that the buildings and/or structures on his/her land</p> <ul style="list-style-type: none"> 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 must: commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties, to investigate the claim; and <p>(b) give the landowner a copy of the property investigation report.</p> <p>If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Proponent must repair the damages to the satisfaction of the Secretary.</p> <p>If the Proponent or landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Secretary for resolution.</p>			Not Activated
	Operating Conditions			
14.	<p>During blasting operations, the Proponent must:</p> <p>(a) implement best management practice to:</p> <ul style="list-style-type: none"> 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 <p>(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 Secretary.</p>	<ul style="list-style-type: none"> Blast Management Plan, Sep 2013 	<p>The Blast Management Plan provides</p> <p>(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;</p> <p>(b) Section 14 addresses Publication of Blast Information on the Metromix website and monitoring results will also be presented at CCC Meetings.</p> <p>An updated Blast Management Plan has been submitted to LMCC for comment.</p>	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
15.	<p>The Proponent must not undertake blasting within 500 metres of:</p> <p>(a) any public road without the approval of Council; or</p> <p>(b) any land outside the site not owned by the Proponent, unless:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> demonstrated to the satisfaction of the Secretary 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 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. 		<p>Blasting did not occur between January 2018 and December 2018:</p> <p>(a) within 500m of a public Road; or</p> <p>(b) within 500m of any residences or any land or buildings / structures outside the Teralba Quarry site operations owned by the Metromix.</p>	Compliant
	Blast Management Plan			
16.	<p>The Proponent must prepare and implement a Blast Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be submitted to the Secretary for approval within 4 months from the date of project approval;</p> <p>(b) be prepared in consultation with the Council and interested members of the local community potentially affected by blasting operations;</p> <p>(c) describe the measures that would be implemented to ensure:</p> <ul style="list-style-type: none"> best management practice is being employed; and compliance with the relevant conditions of this approval; <p>(d) include a road closure management plan for blasting within 500 metres of a public road, that has been prepared in consultation with Council;</p> <p>(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</p> <p>(f) include a monitoring program for evaluating the performance of the project including:</p> <ul style="list-style-type: none"> compliance with the applicable criteria; and minimising fume emissions from the site. <p>The Proponent must implement the plan as approved by the Secretary.</p>	<ul style="list-style-type: none"> 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 Draft Updated Blast Management Plan (Oct, 2018) 	<p>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:</p> <p>(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);</p> <p>(c) Blast Management Plan Section 8 presented Control Measures;</p> <p>(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 11 approx.. 400m north of the closest blasting within the Southern Extension.”</p> <p>(e) Blast Management Plan Section 7.2.5 addresses blast fume potential and management;</p> <p>(f) Blast Management Plan Section 9 provides blast and fume monitoring and Section 10 addresses Evaluation of Compliance.</p>	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance																							
	AIR QUALITY																										
	Air Quality Criteria																										
17.	<p>The Proponent must 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.</p> <p>Table 5: Long-Term Impact Assessment Criteria for Particulate Matter</p> <table><tr><th>Pollutant</th><th>Averaging Period</th><th>Criterion</th></tr><tr><td>Total Suspended Particulates</td><td>Annual</td><td>90µg/m3</td></tr><tr><td>Particulate Matter <10 µm (PM10)</td><td>Annual</td><td>30 µg/m3</td></tr></table> <p>Table 6: Short Term Impact Assessment Criteria for Particulate Matter</p> <table><tr><th>Pollutant</th><th>Averaging Period</th><th>Criterion</th></tr><tr><td>Particulate Matter <10 µm (PM10)</td><td>24 hour</td><td>50 µg/m3</td></tr></table> <p>Table 7: Long-Term Impact Assessment Criteria for Deposited Dust</p> <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> <p>Notes to Tables 5-7:</p> <p>a - Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to all other sources);</p> <p>b - Incremental impact (i.e. incremental increase in concentrations due to the project on its own);</p> <p>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.</p> <p>d - Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Secretary in consultation with EPA.</p>	Pollutant	Averaging Period	Criterion	Total Suspended Particulates	Annual	90µg/m3	Particulate Matter <10 µm (PM10)	Annual	30 µg/m3	Pollutant	Averaging Period	Criterion	Particulate Matter <10 µm (PM10)	24 hour	50 µg/m3	Pollutant	Averaging Period	Max increase in Deposited Dust Level	Max Total Deposited Dust Level	Deposited dust	Annual	2g/m2/mth	4g/m2/mth	<ul style="list-style-type: none">Air Quality Management Plan, Section 8, Sep 2013Draft Updated Air Quality Management Plan, Feb 2019	<p>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.</p> <p>The Air Quality Management Plan Section 9 describes the Air Quality Monitoring program to be conducted:</p> <ul style="list-style-type: none">Five (5) dust deposition gauges are located to the east of the Teralba Quarry and on the outskirts of Teralba:<ul style="list-style-type: none">Hillside Crescent (established June 2004)Myrtle Street (established June 2004)Rhondda Road (established June 2004)Rodgers Street (established April 2011)York Street (established 1 February 2019 to replace the location at Margaret Street after the landowner requested this gauge be removed).A High Volume Air Sampler (HVAS) with PM₁₀ was installed at Rodgers St, Teralba in July 2014.	Compliant
Pollutant	Averaging Period	Criterion																									
Total Suspended Particulates	Annual	90µg/m3																									
Particulate Matter <10 µm (PM10)	Annual	30 µg/m3																									
Pollutant	Averaging Period	Criterion																									
Particulate Matter <10 µm (PM10)	24 hour	50 µg/m3																									
Pollutant	Averaging Period	Max increase in Deposited Dust Level	Max Total Deposited Dust Level																								
Deposited dust	Annual	2g/m2/mth	4g/m2/mth																								
	Greenhouse Gas Emissions																										
18	<p>The Proponent must implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site.</p>			Noted																							

Condition No.	Project Approval condition	Verification	Comments	Compliance
	Operating Conditions			
19	<p>The Proponent must:</p> <p>(a) implement best management practice to minimise the dust emissions of the project;</p> <p>(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,</p> <p>(c) minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see Note d to Tables 5-7 above);</p> <p>(d) minimise any visible off-site air pollution; and</p> <p>(e) minimise surface disturbance of the site and undertake progressive rehabilitation of the site; and</p> <p>(f) monitor and report on compliance with the relevant air quality conditions in this approval, to the satisfaction of the Secretary.</p>	<ul style="list-style-type: none"> • Air Quality Management Plan, Sep 2013 • Draft Updated Air Quality Management Plan, Oct 2018 	<p>(a) the measures established over many years by Metromix are generally consistent with best management practices and have been adopted in the Air Quality Management Plan. These measures 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.</p> <p>(b) If monitoring results approach the criteria identified in Project Approval Schedule 3 condition 17, the Quarry Manager or Quarry Supervisor will review:</p> <ol style="list-style-type: none"> 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. <p>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 DPE and EPA within 7 days of the exceedance in accordance with Project Approval Schedule 5 condition 7.</p> <p>(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.</p> <p>(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.</p> <p>(e) When areas within the Quarry Site are no longer required for operational purposes, they are rehabilitated in accordance with the Biodiversity and Rehabilitation Management Plan.</p>	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
	Air Quality Management Plan			
20	<p>The Proponent must prepare and implement an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with Council, and submitted for approval to the Secretary within 4 months of the date of this approval;</p> <p>(b) describes the measures that would be implemented to ensure:</p> <ul style="list-style-type: none"> – 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; <p>(c) describes the proposed air quality management system; and</p> <p>(d) includes an air quality monitoring program that:</p> <ul style="list-style-type: none"> – 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. <p>The Proponent must implement the plan as approved by the Secretary.</p>	<ul style="list-style-type: none"> • Letter from DP&I re Comments on Air Quality Management Plan, 15 Aug 2013 • Letter to DP&I re Air Quality Management Plan, 6 Sep 2013 • Air Quality Management Plan, Sep 2013 • Letter from DP&I re Approval of Air Quality Management Plan, 10 Oct 2013 • Updated Air Quality Management Plan (Draft 2018) 	<p>The Air Quality Management Plan was prepared to satisfy this Project Approval condition and was approved by DP&I on 10 October 2013:</p> <p>(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 for review and comment on 26 June 2013.</p> <p>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.</p> <p>(b) measures implemented are:</p> <ul style="list-style-type: none"> – 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; <p>(c) the Air Quality Management Plan presents the air quality management system for the Teralba Quarry;</p> <p>(d) Sections 9, 10 and 11 address air quality monitoring and compliance</p>	Compliant
	METEOROLOGICAL MONITORING			
21	<p>For the life of the project, the Proponent must ensure that there is a suitable meteorological station operating in the vicinity of the site that:</p> <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Environment Protection Licence No. 536 • Meteorological data • Correspondence with DPE / EPA regarding station malfunction (15 August 2018). 	<p>The Environment Protection Licence No. 0536 condition M5 describes the requirements for a meteorological station to be available on the Teralba Quarry site.</p> <p>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.</p> <p>The station results are relayed to the computer system in the Teralba Quarry office and are continuously available for on site management of activities.</p>	Administrative Non-Compliance

Condition No.	Project Approval condition	Verification	Comments	Compliance
			In the period between the 29 July 2018 to 10 August 2018 (13 days) the meteorological station was offline for repair following vandalising of the equipment. This break in continuous monitoring was notified to DPE and acknowledged in correspondence dated 15 August 2018. On 11 October 2019 the sensor on the equipment failed but the issue was resolved within the same day.	
	SOIL & WATER			
	<i>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</i>	<ul style="list-style-type: none"> WAL 40303 	Metromix holds Water Access Licence 40303 for 1407ML/year for water pumped from Dam A.	Compliant
	Water Supply			
22	The Proponent must 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.	<ul style="list-style-type: none"> Monitoring records 	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 must 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 POEO Act.	<ul style="list-style-type: none"> Environment Protection Licence No. 536 Monitoring records 	The Environment Protection Licence No. 0536 Variation condition P1.2, identifies EPA approved water discharge points 4 and 5 to be monitored monthly or during discharge (when water is available) for pH, EC, 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.	Noted Compliant
	On-Site Sewage Management			
24	The Proponent must 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 must 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) must be designed in accordance with: <ul style="list-style-type: none"> the requirements of relevant Australian Standards; and DECC's Storing and Handling Liquids: Environmental Protection – Participants Manual. 		<p>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 <i>Storing and Handling Liquids: Environmental Protection Manual</i>).</p> <p>Waste oil is placed in the bunded waste oil tank and the waste oil collected for recycling by Trans-Pacific.</p>	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
	Water Management Plan			
26	<p>The Proponent must prepare and implement a Water Management Plan for the project to the satisfaction of the Secretary. 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 Secretary, and be submitted to the Secretary for approval within 6 months of the date of this approval and prior to any extraction activities within the Northern Extension area.</p> <p>In addition to the standard requirements for management plans (see condition 3 of Schedule 5), this plan must include:</p>	<ul style="list-style-type: none"> Water Management Plan, 2018 	<p>The Water Management Plan was prepared in consultation with the Lake Macquarie City Council , DPI – Water.</p> <p>The most recent version of the WMP was approved in October 2018.</p>	Compliant
26	<p>(a) Site Water Balance that:</p> <ul style="list-style-type: none"> includes details of: <ul style="list-style-type: none"> sources and security of water supply, including contingency planning; water use on site; water management on site; 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; 	<ul style="list-style-type: none"> Water Management Plan, Oct 2018 Specialist Consultant Studies Compendium for the Teralba Quarry Extensions EA, Jun 2012 Part 3 –Surface Water Assessment –BMT-WBM Pty Ltd (2011) WAL 40303 	<p>(a) The site water balance was prepared as part of the Environmental Assessment for the project:</p> <ul style="list-style-type: none"> 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 WAL 40303 from the Mine Audit 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
26	<p>(b) Surface Water Management Plan, that includes:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> clean water diversion systems; erosion and sediment controls; and o water storages; design objectives and performance criteria for proposed: <ul style="list-style-type: none"> erosion and sediment control structures; water storages; and 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; 	Water Management Plan, Oct 2018	<p>(a) A Surface Water Management Plan has been prepared as part of the Water Management Plan Section 7:</p> <ul style="list-style-type: none"> Section 7.1.5 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; 	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
	<ul style="list-style-type: none"> a program to monitor: <ul style="list-style-type: none"> the effectiveness of the water management system; surface water flows and quality in local watercourses and Lake Macquarie; and 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: <ul style="list-style-type: none"> 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; assess appropriate options to improve storage and retention times in accordance with The Blue Book - Managing Urban Stormwater (MUS): Soils and Construction (Landcom); and 		<ul style="list-style-type: none"> 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 	
26	<p>(c) Groundwater Management Plan, that includes:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> surface water inflows into the groundwater system beneath the site; the impacts of the project on: <ul style="list-style-type: none"> 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 a plan to respond to any exceedances of the groundwater assessment criteria; <p><i>Note: The Secretary may require the Proponent to implement upgrades and other changes identified under paragraph (b), in accordance with condition 4 of Schedule 2.</i></p> <p>The Proponent must implement the plan as approved by the Secretary.</p>	Water Management Plan, Section 7.2, Aug 2013	<p>(c) A Groundwater Management Plan has been incorporated in the Water Management Plan Section 7.2:</p> <ul style="list-style-type: none"> 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

Condition No.	Project Approval condition	Verification	Comments	Compliance
	VISUAL			
	Protection of Ridgelines			
27	The Proponent must 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 must ensure that the: <ul style="list-style-type: none"> (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 Secretary. 		<ul style="list-style-type: none"> (a) Works on the eastern faces of the Southern Extension Area (Stage 1A) commenced in December 2013. (b) Regeneration of native endemic understorey and tree canopy will commence on the western benches in Stage 1B (North) of the Southern Extension when the recovery of resource is complete from the upper face areas. 	In Progress
	Operating Conditions			
29	The Proponent must <ul style="list-style-type: none"> (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. 		<ul style="list-style-type: none"> (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 is continuing. 	Compliant Ongoing
	Advertising Signage			
30	The Proponent must not erect or display any advertising structure(s) or signs on the site without the written approval of the Secretary. <i>Note: This condition does not require approval for any business identification, traffic management, and/or safety or environmental signs.</i>		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 must: <ul style="list-style-type: none"> (a) commission a suitably qualified and experienced person endorsed by the Secretary to undertake a road safety audit report of the intersection of York Street and Anzac Parade in consultation with Council; (b) submit the report and any recommendations to the Secretary 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. 	<ul style="list-style-type: none"> • Project Approval 10_0183, granted 22 Feb 2013 • 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 	<ul style="list-style-type: none"> (a) GTA Consultants undertook a road safety audit for the intersection 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. 	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
32	The Proponent must 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 Secretary.		Wheel wash facilities are installed at the quarry exits (bottom/top wheel washes) to ensure truck tyres are cleaned of mud, dirt and dust prior to exiting the site, to avoid tracking dirt onto public roads. Additional sprays were install on the Top Exit Truck Wheelwash during the second half of 2016 and additional hard pavements were also completed in the second half of 2016 prior to the Top Gate Wheel Washes.	
	Operating Conditions			
33	The Proponent must 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 2022-2024.	Not Yet Applicable
34	Within 6 months of the date of this approval, the Proponent must 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 must 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 (i.e. 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 must cover their loads or drivers face disciplinary action in accordance with the Drivers Code of Conduct.	Compliant
37	During the AM peak period and PM peak period, the Proponent must 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 Secretary.	<ul style="list-style-type: none"> 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 products from the site between 6 pm and 6 am.		All trucks owned by Metromix, and its approved contractors are fitted with airbag suspension.	Compliant
	Maintenance			
39	The Proponent must 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 Secretary.		The pavement of the on-site road (after the wheel wash) that connects to Railway Street is well maintained.	Compliant Ongoing

Condition No.	Project Approval condition	Verification	Comments	Compliance
	Monitoring of Product Transport			
40	<p>The Proponent must:</p> <p>(a) keep accurate records of:</p> <ul style="list-style-type: none"> 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 <p>(b) publish these records on its website on a quarterly basis.</p>	<ul style="list-style-type: none"> Traffic Management Plan, Oct 2013 Teralba Quarry Truck Movements www.metromix.com.au 	<p>(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 the Annual Review;</p> <p>(b) All laden truck movements from the site are recorded in accordance with this condition;</p> <p>(c) Truck movements recorded are placed on the Metromix website typically on a monthly basis.</p>	Compliant
	Road Signage			
41	Deleted.			
42	Prior to carrying out quarrying operations under this approval, the Proponent must 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 must 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 has adequate parking on site for all project-related traffic.	Compliant
	Transport Management Plan			
44	<p>The Proponent must prepare and implement a Transport Management Plan for the project to the Secretary. This plan must:</p> <p>(a) be prepared by a suitably qualified traffic consultant in consultation with the RMS and Council, and submitted to the Secretary for approval within 4 months of the date of this approval;</p> <p>(b) include a drivers' code of conduct for the project;</p> <p>(c) describe the measures that would be implemented to ensure:</p> <ul style="list-style-type: none"> 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 <p>(d) include a program to monitor the effectiveness of the implementation of these measures.</p> <p>The Proponent must implement the plan as approved by the Secretary.</p>	<ul style="list-style-type: none"> Transport Management Plan, Oct 2013 Draft Updated Transport Management Plan, Oct 2018. 	<p>A Traffic Management Plan was prepared in June 2013 to satisfy this condition and was approved by DP&I on 10 October 2013:</p> <p>(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;</p> <p>(b) Traffic Management Plan Appendix 1 provides the Drivers Code of Conduct;</p> <p>(c) 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.</p> <p>(d) Traffic Management Plan Section 8 describes Performance and Monitoring of the truck and transport management plan requirements.</p> <p>There were no identified departures from the Teralba Quarry Driver's Code of Conduct during the period from January 2018 to December 2018.</p>	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
	BUSHFIRE MANAGEMENT			
45	The Proponent must: a) ensure that the project is suitably equipped to respond to any fires on site; and b) assist the Rural Fire Service, emergency services and National Parks and Wildlife Service as much as possible if there is a fire in the surrounding area.	<ul style="list-style-type: none"> Bushfire Management Plan, Feb 2014 	A Bushfire Management Plan for the Teralba Quarry was approved in 2014 by the Department of Planning.	Compliant
	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.	<ul style="list-style-type: none"> Waste Management Plan, Oct 2013 	A 'Resource recovery exemption' under the <i>Protection of the Environment Operations Act 1997</i> will be obtained when VENM/ ENM is required for the site.	Not Activated
47	The Proponent must: (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 Secretary.	<ul style="list-style-type: none"> 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 One Steel Metal Recycling Services.	Compliant
48	The Proponent must prepare and implement a Waste Management Plan for the project to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with DRG and Council, and submitted to the Secretary 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. The Proponent must implement the plan as approved by the Secretary.	<ul style="list-style-type: none"> 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
	ABORIGINAL HERITAGE			
	Heritage Management Plan			
49	The Proponent must prepare and implement a Heritage Management Plan for the project to the satisfaction of the Secretary. 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;	<ul style="list-style-type: none"> Heritage Management Plan, Aug 2013 Letter from DP&I re Comments on the Aboriginal Heritage Management Plan, 16 January 2014 	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;	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
	(c) describe the measures that would be implemented for: <ul style="list-style-type: none"> – 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. The Proponent must implement the plan as approved by the Secretary.		(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 review). (c) Comments on the Aboriginal Heritage Management Plan were received from DP&I on 16 January 2014. Updated and approved by DPE on 19 September 2014.	
49A.	If any suspected Aboriginal object or place is identified on site, the Proponent must ensure that: <ul style="list-style-type: none"> (a) all work in the immediate vicinity of the suspected Aboriginal object or place ceases immediately; (b) a 10m buffer area around the suspected Aboriginal object or place is cordoned off; and (c) OEH is contacted immediately. Work in the immediate vicinity of the Aboriginal object or place may only recommence in accordance with the provisions of Part 6 of the <i>National Parks and Wildlife Act 1974</i> .	<ul style="list-style-type: none"> Heritage Management Plan 2013 	Section 11 of the Heritage Management Plan the unexpected finds protocol.	Compliant
	BIODIVERSITY AND REHABILITATION			
	Fauna Habitat			
50	The Proponent must 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.	<ul style="list-style-type: none"> Environmental Assessment Specialist Consultant Studies Compendium Volume 1 Part 5 	Nesting boxes were installed in late 2014 for three fauna species potentially displaced following clearing activities (namely 20 boxes for microbats, 20 boxes for Little Lorikeets and 30 boxes for Sugar Gliders). Metromix has commissioned a qualified ecologist to undertake an inspection and report upon the use of the boxes since 2014 (see Appendix 6).	Compliant
51	The Proponent must, 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.	<ul style="list-style-type: none"> Landscape Management Plan 	The Landscape Management Plan 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 extraction activity.	Compliant Ongoing
	Biodiversity Offset Strategy			
52	The Proponent must retire biodiversity credits specified in conditions 54 to 56 of this schedule in accordance with the Biodiversity Offset Scheme of the Biodiversity Conservation Act 2016, to the satisfaction of the Secretary and OEH.	<ul style="list-style-type: none"> Environmental Assessment, Section 2.17 Project Approval Appendix 5 	This condition is the subject of a modification application that is currently being assessed by DPE. It is currently expected that final Biodiversity Offset Strategy would be prepared and submitted by 30 June 2018 and the strategy would be implemented by 31 December 2018.	Not Yet Activated

Condition No.	Project Approval condition	Verification	Comments	Compliance									
53	<p>The Proponent must prepare and submit a Biodiversity Offset Strategy to the satisfaction of the Secretary. This strategy must:</p> <p>(a) be submitted for approval by the Secretary prior to 30 June 2018, or as otherwise agreed by the Secretary; and</p> <p>(b) be prepared in accordance with the Biodiversity Conservation Act 2016; and</p> <p>(c) provide for the retirement of biodiversity credits as specified in conditions 54 to 56 of this schedule.</p> <p>The Proponent must implement the Biodiversity Offset Strategy to the satisfaction of the Secretary and OEH.</p>	<ul style="list-style-type: none">Biodiversity Offset Strategy 2018	The Biodiversity Offset Strategy was approved by DPE in July 2018.	Compliant									
54	<p>By 31 December 2018, unless otherwise approved by the Secretary, the Proponent must retire all biodiversity credits listed in Table 8 to the satisfaction of the Secretary and OEH.</p> <p><i>Table 8: Biodiversity Credits to be retired by 31 December 2018</i></p> <table><tr><th>Credit Type</th><th>Offset Type</th><th>Number of Credits</th></tr><tr><td>Ecosystem Credits</td><td>PCT1589 'Spotted Gum – Broad-leaved Mahogany – Grey Gum grass – shrub open forest on Coastal Lowlands of the Central Coast'</td><td>670</td></tr><tr><td>Species Credits</td><td>Black-eyed Susan (Tetradlea juncea)</td><td>1103</td></tr></table>	Credit Type	Offset Type	Number of Credits	Ecosystem Credits	PCT1589 'Spotted Gum – Broad-leaved Mahogany – Grey Gum grass – shrub open forest on Coastal Lowlands of the Central Coast'	670	Species Credits	Black-eyed Susan (Tetradlea juncea)	1103			Compliant
Credit Type	Offset Type	Number of Credits											
Ecosystem Credits	PCT1589 'Spotted Gum – Broad-leaved Mahogany – Grey Gum grass – shrub open forest on Coastal Lowlands of the Central Coast'	670											
Species Credits	Black-eyed Susan (Tetradlea juncea)	1103											
55	<p>Prior to any vegetation clearing in Southern Extension Stage 3 (see Figure 7 of Appendix 5) the Proponent must retire all biodiversity credits listed in Table 8a to the satisfaction of the Secretary and OEH.</p> <p><i>Table 8a: Biodiversity credits to be retired prior to vegetation clearing in Southern Extension Stage 3.</i></p> <table><tr><th>Credit Type</th><th>Offset Type</th><th>Number of Credits</th></tr><tr><td>Ecosystem Credits</td><td>PCT1589 - 'Spotted Gum – Broad-leaved Mahogany – Grey Gum grass – shrub open forest on Coastal Lowlands of the Central Coast'</td><td>171</td></tr></table>	Credit Type	Offset Type	Number of Credits	Ecosystem Credits	PCT1589 - 'Spotted Gum – Broad-leaved Mahogany – Grey Gum grass – shrub open forest on Coastal Lowlands of the Central Coast'	171	Environmental Assessment Project Approval – Appendix 6	<p>Works currently in progress are consistent with those required to achieve the required final landform.</p> <p>Rehabilitation of former silt cells and upper benches of Stage 1B has commenced and is consistent with these objectives.</p>	Noted			
Credit Type	Offset Type	Number of Credits											
Ecosystem Credits	PCT1589 - 'Spotted Gum – Broad-leaved Mahogany – Grey Gum grass – shrub open forest on Coastal Lowlands of the Central Coast'	171											

Condition No.	Project Approval condition		Verification	Comments	Compliance	
56	Prior to any vegetation clearing in Northern Extension Stages 1, 2 or 3 (see Figure 7 of Appendix 5) the Proponent must retire all biodiversity credits listed in Table 8b to the satisfaction of the Secretary and OEH. Table 8b: Biodiversity credits to be retired prior to vegetation clearing in Northern Extension Stages 1, 2 or 3			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 audit.	Noted	
	Credit Type	Offset Type				Number of Credits
	Ecosystem Credits	PCT1589 - 'Spotted Gum – Broad-leaved Mahogany – Grey Gum grass – shrub open forest on Coastal Lowlands of the Central Coast'				502
	Long Term Security Offsets					
57	Within 6 months of the approval of the Biodiversity Offset Strategy, or as otherwise agreed by the Secretary, the Proponent must make suitable arrangements for the long-term protection of any land identified in the Strategy, to the satisfaction of the Secretary		• Biodiversity Offset Strategy 2018	The approved Biodiversity Offset Strategy describes Metromix's intention to purchase and retire biodiversity credits in order to satisfy Conditions 54, 55 and 56.	Noted	
	Rehabilitation Objectives					
58	The Proponent must rehabilitate the site to the satisfaction of the Secretary. 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. Table 9: Rehabilitation Objectives			These objectives are addressed for progressive rehabilitation in Section 8.3 of the Annual Review 2018	Noted	
	Feature	Objective				
	Site (as a whole)	<ul style="list-style-type: none">• Safe• Hydraulically and geotechnically stable• Non-polluting• Fit for the intended post-mining land use(s)• Final landform integrated with surrounding natural landforms as far as is reasonable and feasible• Minimising visual impacts when viewed from surrounding land				

Condition No.	Project Approval condition		Verification	Comments	Compliance
	Surface infrastructure	<ul style="list-style-type: none"> Decommissioned and removed, unless otherwise agreed by the Secretary 			
	Benched quarry walls	<ul style="list-style-type: none"> 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 floors and silt ponds	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Restore ecosystem function, including maintaining or establishing self-sustaining eco-systems comprised of: <ul style="list-style-type: none"> native endemic species a landform consistent with Figure 8 (Appendix 6) and the surrounding environment 			
	Progressive Rehabilitation				
59	<p>The Proponent must 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 stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation.</p> <p>Note: It is accepted that parts of the site that are progressively rehabilitated may be subject to future re-disturbance.</p>			Progressive rehabilitation is occurring at the Quarry (see Section 8 of the Annual Review).	Noted

Condition No.	Project Approval condition	Verification	Comments	Compliance
	Biodiversity and Rehabilitation Management Plan			
60	<p>The Proponent must prepare a Biodiversity and Rehabilitation Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <ul style="list-style-type: none"> (a) be prepared by a suitably qualified expert and in consultation with DRG, DPI and Council; (b) be submitted to the Secretary for approval within 12 months of the date of approval of Modification 1; (c) provide details of the conceptual final landform and associated land uses for the site; (d) describe how the implementation of the Biodiversity Offset Strategy would be integrated with the overall rehabilitation of the site; (e) describe the short, medium and long-term measures that would be implemented to: <ul style="list-style-type: none"> – 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; (f) include detailed performance and completion criteria for evaluating the performance of the Biodiversity Offset Strategy and the rehabilitation of the site (including progressive rehabilitation), including triggering remedial action (if necessary); (g) include a detailed description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for: <ul style="list-style-type: none"> – ensuring compliance with the rehabilitation objectives and progressive rehabilitation obligations in this approval; – enhancing the quality of remnant vegetation and fauna habitat; – protecting and restoring native endemic vegetation and fauna habitat within any offset areas and rehabilitation areas; – 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 <i>Tetratheca juncea</i> population; – protecting vegetation and fauna habitat outside the approved disturbance area on-site; – 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; 	<ul style="list-style-type: none"> • Approved Landscape Management Plan 2014 • Draft Biodiversity and Rehabilitation Management Plan 2018 	<p>A Landscape Management Plan was submitted to the DP&I by 22 February 2014 and approved on 19 September 2014. A Biodiversity and Rehabilitation Management Plan that updates this plan in accordance with this condition will be submitted to DPE for approval before 16 April 2019.</p>	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
	<p>(h) include a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria;</p> <p>(i) 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</p> <p>(j) include details of who would be responsible for monitoring, reviewing, and implementing the plan.</p> <p>The Proponent must implement the plan as approved by the Secretary.</p>			
	Rehabilitation Bond			
61	<p>Within 6 months of the approval of the Biodiversity and Rehabilitation Management Plan, the Proponent must lodge a Rehabilitation Bond with the Department to ensure that the rehabilitation of the site is implemented in accordance with the performance and completion criteria set out in the Biodiversity and Rehabilitation Management Plan and the relevant conditions of approval. The sum of the bond must be determined by:</p> <p>(a) calculating the cost of rehabilitating all disturbed areas of the site, taking into account the likely surface disturbance over the next 3 years of quarrying operations; and</p> <p>(b) employing a suitably qualified quantity surveyor or other expert to verify the calculated costs to the satisfaction of the Secretary.</p> <p>The calculation of the Rehabilitation Bond must be submitted to the Department for approval at least 2 months prior to the lodgement of the bond.</p>		The Rehabilitation Bond was lodged in October 2016. Metromix will review and update the Rehabilitation Bond within 6 months of the approval of the Biodiversity and Rehabilitation Management Plan (due 16 April 2019).	Compliant
62	<p>The Rehabilitation Bond must be reviewed and, if required, an updated bond must be lodged with the Department within 3 months following:</p> <p>(a) an update or revision to the Biodiversity and Rehabilitation Management Plan;</p> <p>(b) the completion of an Independent Environmental Audit in which recommendations relating to the rehabilitation of the site have been made; or</p> <p>(c) in response to a request by the Secretary.</p> <p>Notes:</p> <ul style="list-style-type: none"> If capital and other expenditure required by the Biodiversity and Rehabilitation Management Plan is largely complete, the Secretary may waive the requirement for lodgement of a bond in respect of the remaining expenditure. If the rehabilitation of the site area is completed to the satisfaction of the Secretary, then the Secretary will release the bond. If the rehabilitation of the site is not completed to the satisfaction of the Secretary, then the Secretary will call in all or part of the bond, and arrange for the completion of the relevant works. 		The Rehabilitation Bond was lodged in October 2016. No further review of the bond has been required.	Noted

Condition No.	Project Approval condition	Verification	Comments	Compliance
	Relocated Powerlines			
63	The Proponent must ensure that any relocation of existing powerlines on-site does not cause greater than minor environmental consequences.		Relocation of power lines is planned to occur in 2019 and 2020 as the development of the Southern section progresses.	Noted
	SCHEDULE 4 ADDITIONAL PROCEDURES			
	NOTIFICATION OF LANDOWNERS			
1	As soon as practicable and no longer than 7 days after obtaining monitoring results showing an: (a) exceedance of any relevant criteria in Schedule 3, the Proponent must 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 (b) an exceedance of the relevant air quality criteria in Schedule 3, the proponent must 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.			Not Activated
	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 Secretary in writing for an independent review of the impacts of the project on his/her land. If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Proponent must: (a) commission a suitably qualified, experienced and independent expert, whose appointment has been approved by the Secretary, 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 Secretary and landowner a copy of the independent review and; (c) comply with any written requests made by the Secretary to implement any findings of the 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 Secretary. If the independent review determines that the project is not complying with the relevant criteria in Schedule 3, then the Proponent must: (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			Noted

Condition No.	Project Approval condition	Verification	Comments	Compliance
	(b) secure a written agreement with the landowner to allow exceedances of the relevant criteria, to the satisfaction of the Secretary.			
	SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING			
	ENVIRONMENTAL MANAGEMENT			
	Environmental Management Strategy			
1	<p>The Proponent must prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must:</p> <p>(a) be submitted to the Secretary for approval with 6 months of the date of this approval;</p> <p>(b) provide the strategic framework for environmental management of the project;</p> <p>(c) identify the statutory approvals that apply to the project;</p> <p>(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;</p> <p>(e) describe the procedures that would be implemented to:</p> <ul style="list-style-type: none"> – 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 <p>(f) include:</p> <ul style="list-style-type: none"> – references to 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. <p>The Proponent must implement the strategy as approved by the Secretary.</p>	<ul style="list-style-type: none"> • Approved Environmental Management Strategy, 2018 	<p>An Environmental Management Strategy was prepared to satisfy Project Approval Schedule 5 condition 1 and submitted to DP&I on 22 August 2013. DP&I approved the original Environmental Management Strategy on 16 January 2014:</p> <p>(a) the Environmental Management Strategy was submitted to DP&I on 22 August 2013;</p> <p>(b) EMS Section 2 addresses the Strategic Framework for environmental management;</p> <p>(c) EMS Section 3 identifies Legal and Other Requirements for the Teralba Quarry;</p> <p>(d) EMS Section 14 addresses Roles and Responsibilities of all key personnel involved in the environmental management of the Teralba Quarry;</p> <p>(e) the EMS describes procedures for:</p> <ul style="list-style-type: none"> – 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 ; <p>(f) Section 3.3 Environmental Management Plans, and Section 5 Monitoring.</p>	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
	Adaptive Management			
2	<p>The Proponent must 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.</p> <p>Where any exceedance of these criteria and/or performance measures has occurred, the Proponent must as soon as becoming aware of any exceedance:</p> <ul style="list-style-type: none"> (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not reoccur; (b) consider all reasonable and feasible options for remediation (where relevant); (c) within 14 days of the exceedance occurring, submit a report to the Secretary describing these remediation options and any preferred remediation measures or other course of action; and (d) implement remediation measures as directed by the Secretary, to the satisfaction of the Secretary. 			Noted
	Management Plan Requirements			
3	<p>The Proponent must ensure that the Management Plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p> <ul style="list-style-type: none"> (a) detailed baseline data; (b) a description of: <ul style="list-style-type: none"> – 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: <ul style="list-style-type: none"> – 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; 	<ul style="list-style-type: none"> • Project Approval references: Schedule 3 condition 20 - Air Quality Management Plan • 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 	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.	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
	<p>(g) a protocol for managing and reporting any:</p> <ul style="list-style-type: none"> – incidents; – complaints; – non-compliances with statutory requirements; and – exceedances of the impact assessment criteria and/or performance criteria; and <p>(h) a protocol for periodic review of the plan.</p> <p><i>Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</i></p>			
	Evidence of Consultation			
3A	<p>Where conditions of this approval require consultation with an identified party, the Proponent must:</p> <p>(a) consult with the relevant party prior to submitting the subject document to the Secretary for approval; and</p> <p>(b) provide details of the consultation undertaken, including:</p> <ul style="list-style-type: none"> – the outcome of that consultation, matters resolved and unresolved; and – details of any disagreement remaining between the party consulted and the Proponent and how the Proponent has addressed any unresolved matters. <p>However, if the Secretary agrees, a strategy, plan or program may be prepared without consultation being undertaken with an identified party required under a condition of this approval.</p>		Not yet required	Noted
	Annual Review			
4	<p>By the end of March each year, the Proponent must review the environmental performance of the project to the satisfaction of the Secretary. This review must:</p> <p>(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:</p> <ul style="list-style-type: none"> – the relevant statutory requirements, limits or performance measures/criteria; – the monitoring results of previous years; and – the relevant predictions in the documents listed in condition 2A of Schedule 2; 	2018 Annual Review	<p>This is the sixth Annual Review for the Teralba Quarry Extensions.</p> <p>All nominated contents are included in the document.</p>	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
	(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 must review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Secretary. The Proponent must notify the Department in writing of any such review being undertaken. Where this review leads to revisions in any such document, then within 6 weeks of the review the revised document must be submitted for the approval of the Secretary. <i>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.</i>		Following the approval of Modification 1 to PA 10_0183 Metromix was required to update and submit all management plans for approval. Metromix is yet to finalise consultation for each of the management plans and is awaiting comments from stakeholders.	Administrative Non-Compliance
	Community Consultative Committee			
6	The Proponent must establish and operate a Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary. This CCC must be operated in general accordance with the <i>Department's Community Consultative Committee Guidelines for State Significant Developments, November 2016, or its latest version</i>), and be operating <i>within four months of the date of this approval</i> <i>Notes:</i> <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> CCC Meeting Minutes 20 April 2018 CCC Meeting Minutes 9 November 2018 (see Appendix 4) 	The establishment of the Community Consultative Committee (CCC) occurred later than four months after the date of this approval. The non-compliance arose principally 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.	Not Compliant (date for CCC establishment) Compliant (for operation of CCC)

Condition No.	Project Approval condition	Verification	Comments	Compliance
	REPORTING			
	Incident Reporting			
7	The Proponent must immediately notify the Secretary (using the contact name, email address and phone number provided by the Department from time to time) and any other relevant agencies of any incident.		No incidents that caused or threatened to cause material environmental harm occurred between January 2018 and December 2018. On Tuesday 31 July 2018, Metromix notified DPE that the meteorological station had been vandalised and was offline. DPE were again notified on 10 August 2018 when the station was repaired and operating.	Compliant
7B	Within 7 days of the date of the incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested. This report must include the time and date of the incident, details of the incident, measures implemented to prevent re-occurrence and must identify any non-compliance with this approval.		As the incident with the meteorological station did not threaten environmental harm, an incident report was not warranted.	Not Triggered
	Regular Reporting			
8	The Proponent must 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/	Metromix updates the website for Teralba Quarry on a monthly basis.	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 Secretary directs otherwise, the Proponent must 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 Secretary; (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 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. <i>Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.</i>	Letter from DP&I re Approval of Independent Auditor, 14 Jan 2014 and 2016	The first Independent Environmental Audit was conducted within 1 year of commencement of development by Trevor Brown endorsed by the Director-General on 14 January 2014. The second Independent Environmental Audit was conducted within 3 years of the first review by Trevor Brown endorsed by the Director-General on 15 December 2016	Compliant
10	Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.		The first Independent Environmental Audit was submitted to the DPE in March 2014 together with the required response. The second Independent Environmental Audit was submitted to the DPE in February 2017 together with the required response.	Compliant

Condition No.	Project Approval condition	Verification	Comments	Compliance
	ACCESS TO INFORMATION			
11	<p>Within 4 months of the date of this approval, the Proponent :</p> <p>(a) make the following information publicly available on its website:</p> <ul style="list-style-type: none"> – the EA; – current statutory approvals for the project; – approved strategies, plans or programs; – a summary of the monitoring results of the project, which have 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 Secretary; and <p>(b) keep this information up-to-date, to the satisfaction of the Secretary.</p>	www.metromix.com.au/	<p>The following information is publicly available on Metromix' website:</p> <ul style="list-style-type: none"> • Environmental Protection License 536 • Teralba Quarry Project Approval 10_0183 • Response To EA Submissions • Environmental Assessment, Nov 2011 • Specialist Consultant Studies Compendium Volume 1 and Volume 2, Nov 2011 • Community Consultative Committee (CCC) Minutes • Environmental Management Strategy • Air Quality Management Plan • Blast Management Plan • Heritage Management Plan • Landscape Management Plan • Bushfire Management Plan • Noise Management Plan • Transport Management Plan • Waste Management Plan • Water Management Plan • Community Complaints • Non Compliances • Monitoring results 	Compliant Ongoing

Part 2 Statement of Commitments

Note: All commitments that are duplicates (or with similar/identical outcomes) of the Conditions within PA10_0183 have been removed as part of the 2016 Annual Review.

Colour Code for Compliance Assessment



Compliant



Compliant Ongoing / In Progress



Non-compliant



Administrative Non-Compliance



Noted / Not Applicable / Not Yet Applicable



Not Activated / Not Yet Activated

Part 2 - Statement of Commitments

(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).				
2	Operating Hours				
	Management of operations in accordance with the approved operating hours. (Note: No activities and operations are proposed on public holidays).				
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
2.4	Undertake all blasts between 10:00am and 4:00pm Monday to Friday.	During operations	<ul style="list-style-type: none"> Blast Monitoring Records 2018 – see Appendix 1 	Blasts are only conducted between 10:00am and 4:00pm Monday to Friday.	Compliant
2.5	Restrict activities undertaken outside the hours identified in 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, any emergency service or Council. would be provided to the Secretary and EPA within a reasonable period of the request.	Details of the circumstances of these requests			Noted
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		All paper and general waste materials are placed in garbage bins.	Compliant
3.2	Segregate waste into recyclables and non-recyclable materials for removal by a licensed contractor.	Ongoing		Recyclables are separated.	Compliant
	Minimisation of the potential risk of environmental impact due to waste creation, storage and/or disposal.				
3.3	Organise the regular collection of industrial wastes.	Monthly or as needs basis		Industrial wastes are collected by appropriately licenced operators as needed.	Compliant
3.4	Store waste oils and greases within the workshop area in either self-bunding containers or within suitably contained areas.	Ongoing		All oils and greases are stored in suitably bunded containers	Compliant

SoC No.	Action	Timing	Verification	Comment	Compliance
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		Extraction not yet commenced in the Northern Extension	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. The signs would identify the presence of earthmoving equipment, deep excavations and steep slopes.	Ongoing		Security warning signs are present around the site to warn of earthmoving equipment/vehicle movements, deep excavations and steep slopes of quarry excavation areas.	Compliant
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
5	Rehabilitation and Biodiversity Offset Management				
5.1	Deleted.				
5.2	Deleted.				
6	Groundwater				
Prevention of groundwater contamination.					
6.1	Securely store all hydrocarbon products within designated and bunded areas – see Action 16.11.	Ongoing		All hydrocarbons are stored in suitably bunded containers	Compliant
6.2	Refuel and maintain all earthmoving equipment within designated areas – see Action 16.11.	Ongoing		All earthmoving equipment is refuelled in the fuel bay and maintained in the workshop.	Compliant
6.3	Prepare a Groundwater Management Plan, including trigger levels for actions – see Action 16.3.	Ongoing		Groundwater management is incorporated into the approved Water Management Plan.	Compliant
6.4	Prepare a Spill Management Plan to address potentially significant hydrocarbon spills – see Action 16.11.	Ongoing		Spill management is incorporated into document internal procedures	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 2018	A water monitoring program has been implemented in accordance with the Water Management Plan. This includes monitoring of the Adit Dam which is groundwater fed	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 2018	Water quality monitoring is undertaken monthly at the Mine Adit Dam and at other locations only during discharge.	Compliant
6.7	Record flows/discharges from the Mine Adit Dam as well as quarry water usage.	Continuous	Water Management Plan 2018	Several flow meters have been installed at the Quarry to record this information.	Compliant

SoC No.	Action	Timing	Verification	Comment	Compliance
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.	Compliant Ongoing
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	Compliant Ongoing
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.	Landscape Management Plan 2016 and Water Management Plan 2018	No vegetation clearing occurring during the reporting period. A vegetation clearing protocol has been incorporated within the Landscape Management Plan 2016 and erosion and sediment controls described in the Water Management Plan 2018.	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.	Landscape Management Plan 2016 and Water Management Plan 2018	No vegetation clearing occurring during the reporting period. Erosion and sediment controls are considered in planning and execution of vegetation clearing	Compliant
7.3	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.	Water Management Plan 2018	The most recently approved Water Management Plan supersedes this commitment.	Compliant
7.4	Ensuring any off-site discharge is monitored and reported in accordance with Environment Protection Licence 536.	As Required.	Water Management Plan 2018	The water monitoring program in the approved Water Management Plan 2018 stipulates this requirement. Monitoring during the reporting period satisfied this requirement.	Compliant
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.	Water Management Plan 2018	The Water Management System at the Quarry has been designed to capture sediment laden runoff during design rainfall events.	Compliant
7.10	Inspect all sediment dams and maintain as necessary (keep records).	Monthly or following rainfall exceeding 100mm in 2 days.	Water Management Plan 2018	Weekly visual inspections of the Water Management System are undertaken.	Compliant
7.11	Remove accumulated sediment from sediment dams when storage capacity reduced by 25% - document activity in maintenance records.	Following routine inspection.	Water Management Plan 2018	There has been no requirement to remove accumulated sediment in dams. The most recent works involved rock and geofabric lining dams to prevent scouring.	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.			

SoC No.	Action	Timing	Verification	Comment	Compliance
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.	Observed drainage	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 Commitment 16.7.	Within 12 months of the receipt of project approval.	Landscape Management Plan 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Vegetation management has been included in the approved Landscape Management Plan.	Compliant
8.2	Clearly define the Tetratheca juncea sub-populations to be retained.	For the life of the Project.	Landscape Management Plan 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Locations of Tetratheca juncea sub-populations are identified as well as locations for translocated individuals.	Compliant
8.3	Continue the established rehabilitation practices in appropriate areas.	Ongoing.	Landscape Management Plan 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Progressive rehabilitation is occurring successfully.	Compliant
8.4	Retain the extracted topsoil and vegetation within the immediate area of Tetratheca juncea populations and relocate to easement locations.	During clearing.		Topsoil and vegetation in the vicinity of removed Tetratheca juncea populations has been applied in rehabilitation works.	Compliant
8.5	Transfer biomass directly from vegetation clearing operations to rehabilitation areas. If it is not possible to transfer directly, stockpile material.	Ongoing.		Biomass has been applied to areas undergoing rehabilitation.	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.	Bush Regeneration Report (Appendix 5) Landscape Management Plan 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Weed management is incorporated into annual management plans implemented by TENTACLE.	Compliant
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.	Nesting Box Monitoring Report (Appendix 6)	Nesting boxes have been installed and are monitored annually.	Compliant

SoC No.	Action	Timing	Verification	Comment	Compliance
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: <ul style="list-style-type: none">9 per hour; and85 per day.	Ongoing	Transport Management Plan 2013 Draft Transport Management Plan 2018 Transport Monitoring records (Appendix 1)	Traffic levels are limited in accordance with the consent and this commitment. Transport numbers and directions are reported each year and were compliant during the reporting period.	Compliant
9.2	Ensure that no product trucks from Teralba Quarry travel eastward through Teralba between 6:00pm and 6:00am.		Transport Monitoring records (Appendix 1)	No product trucks from Teralba Quarry travelled eastward through Teralba between 6:00pm and 6:00am during the reporting period.	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.	Wheel wash observed.	All trucks are required to use the wheel wash prior to departing from the bottom gate at the Quarry.	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.		A Voluntary Planning Agreement with Lake Macquarie Council has been signed and enacted.	Compliant
9.5	Prepare, implement and enforce 'Drivers Code of Conduct' addressing: <ul style="list-style-type: none">times that trucks can operate, especially through Teralbaspeed limits;duty of care to other drivers and pedestrians;complaints procedure;covering loads; andavoidance of exhaust brakes.	Prepare within 4 months of receipt of project approval.	Transport Management Plan 2013 Draft Transport Management Plan 2018	The Drivers Code of Conduct is included in the approved plan and all drivers are required to sign and abide by the code of conduct. There were no incidents involving non-compliance with the code of conduct during the reporting period.	Compliant
9.6	Undertake all transport activities in accordance with the project approval and Environment Protection Licence 536.	Ongoing.	Transport Monitoring records (Appendix 1)	During the reporting period all transport activities occurred in accordance with the project approval and Environment Protection Licence 536.	Compliant
9.7	Ensure that only trucks owned by Metromix, or 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.	Ongoing	Transport Management Plan 2013 Draft Transport Management Plan 2018	This requirement forms part of the Drivers Code of Conduct for the Quarry.	Compliant
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		Metromix maintains all company-owned trucks to ensure that truck noise is reduced.	Compliant
10	Noise and Vibration				
10.1	Ensure all mobile earthmoving equipment used on site is not fitted with high-frequency reversing alarms and is regularly serviced.	Ongoing.		No high-frequency mobile equipment reversing alarms are used at the Quarry. Metromix maintains all company-owned equipment to ensure that noise is reduced.	Compliant

SoC No.	Action	Timing	Verification	Comment	Compliance
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.	Not required	No new equipment was used at the Quarry during the reporting period.	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.	Extraction progress	Metromix continued this pattern of development during the reporting period.	Compliant
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
10.5	Limit transportation noise by ensuring: <ul style="list-style-type: none"> 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 2013 Draft Transport Management Plan 2018 Complaints register	Metromix operated in a manner that limited transport noise during the reporting period. A complaint relating to transport noise resulted in a noise vehicle being removed from the Quarry Site.	Compliant
10.6	Commission a noise monitoring program that comprises: <ul style="list-style-type: none"> 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 Biannually for the first year of operation in the Southern and Northern Extensions, and further monitoring when substantiated complaints are filed.	<ul style="list-style-type: none"> Noise Management Plan, Section 9, 2018 	Noise monitoring is outlined in the Noise Management Plan:	Compliant
				<ul style="list-style-type: none"> Independent monitoring is required to be undertaken during the first 2 years of operations at 6 monthly intervals coinciding with wind blowing in a predominantly eastern and western direction. Monitoring was only undertaken on two occasions during 2016. The frequency of monitoring will then revert to annual monitoring during a period of wind blowing from the western quadrant towards residences in Teralba. 	Noted
10.7	Include a summary of all noise monitoring results in the AEMR.	Annually.	This document	See Section 6.2	Compliant
10.8	Ensure all trucks departing the Project Site via the bottom gate travel at speeds <15km/hr.	Ongoing.	Transport Management Plan 2013 Draft Transport Management Plan 2018	Truck speed is limited through signage and instruction provided in the Drivers Code of Conduct.	Compliant
10.9	Review blast designs and modify, if required.	When blasting within 500m of any residence.		No blasting has occurred throughout 2018 within 500m of any residence.	Noted

SoC No.	Action	Timing	Verification	Comment	Compliance
11	Air Quality				
Site activities are undertaken without exceeding DECCW air quality criteria or goals.					
11.1	Minimise clearing ahead of extraction activities	Ongoing.	Landscape Management Plan 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	No vegetation clearing occurring during the reporting period. Only those areas required for extraction are cleared ahead of time.	Compliant
11.2	Minimise the construction of minor roads and access tracks for soil stripping, extraction operations and rehabilitation.	Ongoing.	Landscape Management Plan 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	No new roads or tracks were constructed during the reporting period.	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.	Observed equipment	A water cart is used at site for dust suppression.	Compliant
11.4	Stockpile material in sheltered locations away from sensitive receptors	Ongoing.		Stockpiles are located away from residences.	Compliant
11.5	Shield and/or suppress dust on conveyors and transfer points.	Ongoing.		Dust suppression is built into processing equipment.	Compliant
11.6	Limit internal road dust lift off by: <ul style="list-style-type: none">• surfacing (and grading local) roads with appropriate materials;• enforcing a 30km/hr speed limit on all internal roads;• limiting load sizes to ensure that product does not extend over truck sidewalls; and• avoiding spillage during truck loading.	Ongoing.	Air Quality Management Plan 2013 Draft Air Quality Management Plan 2018	Quarry personnel actively limit dust generation by applying these measures.	Compliant
11.7	Minimise dump heights from trucks, front-end loaders and conveyors.	Ongoing.	Air Quality Management Plan 2013 Draft Air Quality Management Plan 2018	Quarry personnel actively limit dust generation by applying this measure.	Compliant
11.8	Schedule blasts so that they do not occur during high wind situations.	Ongoing.	Air Quality Management Plan 2013 Draft Air Quality Management Plan 2018	Blasts are scheduled in conjunction with the blasting contractor and decisions include consideration of forecast weather conditions.	Compliant
11.9	Cease or modify activities on dry windy days when dust plumes are visible.	Ongoing.	Air Quality Management Plan 2013 Draft Air Quality Management Plan 2018	There were no conditions during which operations needed to cease or be reduced due to dry windy weather.	Compliant

SoC No.	Action	Timing	Verification	Comment	Compliance
11.10	Water exposed areas not covered by gravel under dry and windy conditions when dust plumes are visible.	Ongoing.	Observed equipment	A water cart is used at site for dust suppression.	Compliant
11.11	Adopt a complaints management system where all complaints are dealt with through investigation and implementation of corrective treatments.	Ongoing.	Complaints register (Appendix 4)	A complaints register has been established for the Quarry.	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 (bottom wheel wash) 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 (top wheel wash) to reduce the potential for mud tracking onto the public road. Additional sprays and hard pavement surfaces were installed in 2016 to help 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.	Air Quality Management Plan 2013 Draft Air Quality Management Plan 2018	Incorporated into approved Air Quality Management Plan	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: <ul style="list-style-type: none"> • 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.		These measures are included in operations to minimise greenhouse gas generation.	Compliant
11.17	Minimise the impacts of greenhouse gases relating from electricity consumption by: <ul style="list-style-type: none"> • 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.		Electricity savings are encouraged at the Quarry and these measures are included in operations to minimise greenhouse gas generation.	Compliant
	Continue to monitor dust impacts through; <ul style="list-style-type: none"> • the existing five deposited dust gauges; and • on-site meteorological monitoring to record relevant parameters. 	Ongoing.	Air Quality Management Plan 2013 Draft Air Quality Management Plan 2018	Landowners have requested that the deposited dust monitor at Margaret Street be removed. An alternate location has been identified at York Street.	Compliant

SoC No.	Action	Timing	Verification	Comment	Compliance
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		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
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).	Plate 1	Extraction has been sequenced to obscure the western faces while vegetation is established on the uppermost (visible) benches.	Compliant
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 north-south faces.	Years 22 to 30 (approx).			Not Yet Activated
12.5	Include Annual photographs of the progressive rehabilitation of quarry benches in each AEMR.	Annually	Plate 7	Photos of progressive rehabilitation are included in Section 4 of the Annual Review	Compliant
13	Heritage				
Provide appropriate protection to existing and future identified Aboriginal artefacts.					
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	Heritage Management Plan 2014		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	Heritage Management Plan 2014		Noted
13.3	Maintain reasonable efforts to avoid impacts to Aboriginal cultural heritage values at all stages of the development works	Ongoing	Heritage Management Plan 2014		Noted
13.4	Invite representatives of Local Aboriginal stakeholders to monitor initial ground disturbance activities.	Prior to soil stripping campaigns.	Heritage Management Plan 2014	No monitoring was undertaken during the reporting period but was undertaken on 25 February 2019	Not Yet Activated
13.5	Provide appropriate protection to any non-Aboriginal artefacts identified in operational areas. 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.	Heritage Management Plan 2014	No non-Aboriginal items had been identified in operational areas.	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

SoC No.	Action	Timing	Verification	Comment	Compliance
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 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Soil management is implemented as required in accordance with the approved Landscape Management Plan	Noted
14.2	Place stripped soil directly onto reshaped overburden or dedicated stockpile area.	During soil stripping operations.	Landscape Management Plan 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Soil management is implemented as required in accordance with the approved Landscape Management Plan	Noted
14.3	Remove soil through grading or pushing soil into windrows with graders or dozers for later collection for loading into rear dump trucks by front-end loaders.	During stripping and transport operations.	Landscape Management Plan 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Soil management is implemented as required in accordance with the approved Landscape Management Plan	Noted
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 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Soil management is implemented as required in accordance with the approved Landscape Management Plan	Noted
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 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Soil management is implemented as required in accordance with the approved Landscape Management Plan	Noted
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 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Soil management is implemented as required in accordance with the approved Landscape Management Plan	Noted
14.7	Maintain an inventory of available soil to ensure adequate topsoil materials are available for planned rehabilitation activities.	Ongoing.	Landscape Management Plan 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Soil management is implemented as required in accordance with the approved Landscape Management Plan	Noted
14.8	Assess soil stockpiles for weed infestation to determine if stockpiles require weed removal applications before being re-spread onto reshaped overburden.	During staged Rehabilitation stages.	Landscape Management Plan 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Soil management is implemented as required in accordance with the approved Landscape Management Plan	Noted

SoC No.	Action	Timing	Verification	Comment	Compliance
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.	<ul style="list-style-type: none">Landscape Management Plan (draft), Section 16, Feb 2014	The evaluation of rehabilitation described in the Landscape Management Plan, 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			Compliant 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.	Bushfire Management Plan 2014	Metromix operate in accordance with a Bushfire Management Pan	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 the receipt of project approval.	Environmental Management Strategy	Latest version approved in January 2019	Compliant
16.2	Environmental Management Plan (EMP). Focus on the next 5 years.	Within 6 months of receipt of project approval.	Environmental Management Strategy	5-year planning is incorporated into the Environmental Management Strategy	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	Latest version approved in January 2019	Compliant
16.4	Noise and Blast Management Plan. (Incorporating a blast and noise monitoring component.)	Within 4 months of the receipt of project approval.	Blast Management Plan Noise Management Plan	Latest version approved in 2013. Draft versions of these plans are being reviewed by stakeholders.	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	Latest version approved in 2013. A draft version is being reviewed by stakeholders.	Compliant
16.6	Transport Management Plan.	Within 4 months of receipt of project approval.	Transport Management Plan.	Latest version approved in 2013. A draft version is being reviewed by stakeholders.	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 2016 Draft Biodiversity and Rehabilitation Management Plan 2019	Latest version approved in 2014. This plan is being updated as a Biodiversity and Rehabilitation Management Plan which is currently being reviewed by stakeholders.	Compliant
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.	Lower Level Management Plan	Latest version approved in 2018	Compliant

SoC No.	Action	Timing	Verification	Comment	Compliance
16.9	Heritage Management Plan.	Within 4 months of the receipt of project approval.	Heritage Management Plan.	Latest version approved in 2014. A draft version is being reviewed by stakeholders.	Compliant
16.10	Annual Environmental Management Report (AEMR).	Annually (by 31 March each year covering the previous calendar month) .	This document		Compliant
16.11	Hydrocarbon Management Plan. (Incorporating the storage and use of fuel and spill management.)	Within 6 months of receipt of approval.	Waste Management Plan	Latest version approved in 2013. A draft version is being reviewed by stakeholders.	Compliant
16.12	Annual Production Statistics to the DTIRIS (Division of Resources and Energy).	Annually (by 31 July).	See Appendix 1	These statistics are provided to the Division of Resources each year.	Compliant
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 review 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

Appendix 2

Monitoring Data and Records

(Total No. of pages including blank pages = 94)

2017-2018 Annual Return for Extractive Materials.....A2-3

2018 Transportation MovementsA2-5

2018 Air Quality Monitoring.....A2-66

2018 Surface Water MonitoringA2-68

2018 Daily Rainfall MonitoringA2-70

2018 Noise Monitoring ReportsA2-71

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Planning &
Environment
Resources & Geoscience

Form S 1

RETURN FOR EXTRACTIVE MATERIALS: YEAR ENDED 30 JUNE 2018

Quote RIMS ID in all correspondence

Quarry Id: 1118	Rims ID: 400066	Inquiries please telephone: (02) 4063 6713	2 0 1 7 - 2 0 1 8
Operators Name: Address:	METROMIX PTY LTD PO BOX 1295 PARRAMATTA NSW 2124	Completed or Nil Returns Email – mineral.royalty@planning.nsw.gov.au Postal Address (see below)	
Email:	bills@metromix.com.au		
Quarry Name: Quarry Address:	TERALBA QUARRY RHONDDA RD	Please amend name, postal address and location of mine or quarry if incorrect or incomplete.	

The return should be completed and forwarded to the **MANAGER, ASSESSMENT COORDINATION, RESOURCE OPERATIONS, NSW DEPARTMENT OF PLANNING & ENVIRONMENT, PO BOX 344 HUNTER REGION MAIL CENTRE NSW 2310 on or before 30 November 2018**. If completion of the return is unavoidably delayed, an application for extension of time should be requested **before** the due date. If no work was done during the year, a **NIL** return must be forwarded.

The return should relate to the **above quarrying establishment**, and should cover the operations of quarrying and treatment (such as crushing, screening, washing etc.) carried out at or near the quarry. A return is required even if the operations are solely of a developmental nature, and whether the area being worked is held under a mining title or otherwise.

Director, Title Assessments

Please complete all of the following information to assist in identifying the location of the Quarry

Typical Geology _____ Conglomerate _____

Nearest Town to Quarry _____ Teralba _____

Local Council Name _____ Lake Macquarie _____

Deposited Plan and Lot Number/s of Quarry _____ Lots 1 & 2 DP 224037 _____

Email Address of Operator _____ moy@metromix.com.au _____

Name of Owner or Licensee _____ METROMIX _____

Postal Address of Licensee _____ Po Box 1295 Parramatta NSW 2124 _____

Licence/Lease Number/s (if any)
From Mineral Resources NSW (Industry & Investment NSW) _____ N/A _____
From Department of Lands or other Department _____ N/A _____

If any output was obtained from land NOT held under licence from the above Departments, state the Name/s and Address/es of the Owners of the land _____ Graem Kenby – 25 Robinson St, Spalding WA 6530 _____

- To the best of my knowledge, the particulars which have been entered in this return are correct and no blank spaces have been left where figures should have been inserted.

• SIGNATURE of PROPRIETOR or MANAGER _____ DATE 14/11/2018 _____

• CONTACT PERSON for this return _____ Muhammad Yunusa _____

• NAME (Block letters) _____ Muhammad Yunusa _____ Telephone 0423832077 _____



SALES During 2017-2018

Production information may be published in aggregated form for statistical reporting. However, production data for individual operations is kept strictly confidential.

Product	Description	Quantity Tonnes
Virgin Materials		
• Crushed Coarse Aggregates		
Over 75mm		
Over 30mm to 75mm		
5mm to 30mm		
Under 5mm		
Natural Sand		
Manufactured Sand		
Prepared Road Base & Sub Base		
Other Unprocessed Materials		
Recycled Materials		
• Crushed Coarse Aggregates		
Over 75mm		
Over 30mm to 75mm		
5mm to 30mm		
Under 5mm		
Natural Sand		
Manufactured Sand		
Prepared Road Base & Sub Base		
Other Unprocessed Materials		
• River Gravel	Conglomerate	
Over 30mm		20405
5mm to 30mm		325931
Under 5mm		
• Construction Sand	Excluding Industrial	204320
• Industrial Sand		
Foundry, Moulding		
Glass		
Other (Specify)		
• Dimension Stone	Building, Ornamental, Monumental	
Quarried in Blocks		
Quarried in Slabs		
• Decorative Aggregate	Including Terrazzo	
• Loam	Soil for Topdressing, Garden soil, Horticultural purposes)	
• TOTAL SITE PRODUCTION		550,656
• Gross Value (\$) of all Sales	13,579,850	
• Type of Material	Conglomerate	
• Number of Full-Time Equivalent (FTE) Employees	Employees: 15	Contractors 2

Please Note: A return for clay based products can be obtained by contacting the inquiry number.

Table 2E: Total Number of Laden Trucks

TERALBA QUARRY						Month:		Jan-18	
	Daily Total	Max Hourly Daily	Max Hourly Daily	Max Hourly Daily	Max Hourly Daily	Westwards	Eastwards		
						Daily	Daily		
						6pm to 5am	5am to 6am	6am to 7am	7am to 6pm
Limits	326	6	12	28	20	241	85		
Actuals									
	1	-	-	-	-	-	-		
	2	10	-	-	1	2	2	8	
	3	14	-	-	-	3	7	7	
	4	11	1	-	3	3	6	5	
	5	17	-	-	1	4	2	15	
	6	-	-	-	-	-	-	-	
	7	-	-	-	-	-	-	-	
	8	34	-	-	6	6	23	11	
	9	16	-	-	-	4	4	12	
	10	31	2	-	-	5	10	21	
	11	62	2	-	6	9	37	25	
	12	55	1	-	5	12	26	29	
	13	6	2	-	1	1	5	1	
	14	-	-	-	-	-	-	-	
	15	45	1	-	7	7	20	25	
	16	52	1	-	7	7	32	20	
	17	61	4	-	7	12	41	20	
	18	59	4	-	5	8	40	19	
	19	65	4	-	8	11	27	38	
	20	12	3	-	1	2	6	6	
	21	-	-	-	-	-	-	-	
	22	60	3	-	5	10	32	28	
	23	66	-	2	12	9	40	26	
	24	65	6	1	5	10	37	28	
	25	56	3	1	7	8	36	20	
	26	-	-	-	-	-	-	-	
	27	-	-	-	-	-	-	-	
	28	-	-	-	-	-	-	-	
	29	51	3	1	5	9	30	21	
	30	98	3	-	8	13	55	43	
31	97	5	-	9	18	67	30		

Table 2A: Number of Laden Trucks - 6:00pm to 5:00am

TERALBA QUARRY			Month:		Jan-18			
		Daily Total		Westwards			Eastwards	
				Daily	Max Hourly		Daily	Max Hourly
Limits		66		66	6		0	0
Actuals								
1		-		-	-		-	-
2		-		-	-		-	-
3		-		-	-		-	-
4		1		1	1		-	-
5		-		-	-		-	-
6		-		-	-		-	-
7		-		-	-		-	-
8		-		-	-		-	-
9		-		-	-		-	-
10		3		3	2		-	-
11		3		3			-	-
12		2		2	1		-	-
13		2		2	2		-	-
14		-		-	-		-	-
15		1		1	1		-	-
16		2		2	1		-	-
17		5		5	4		-	-
18		7		7	4		-	-
19		6		6	4		-	-
20		5		5	3		-	-
21		-		-	-		-	-
22		3		3	3		-	-
23		-		-	-		-	-
24		6		6	6		-	-
25		3		3	3		-	-
26		-		-	-		-	-
27		-		-	-		-	-
28		-		-	-		-	-
29		3		3	3		-	-
30		5		5	3		-	-
31		6		6	5		-	-

Table 2B: Number of Laden Trucks - 5:00am to 6:00am

TERALBA QUARRY		Month:		Jan-18
		Westwards		Eastwards
		Max Hourly		Max Hourly
Limits*		12		0
Actuals				
1		-		-
2		-		-
3		-		-
4		-		-
5		-		-
6		-		-
7		-		-
8		-		-
9		-		-
10		-		-
11		-		-
12		-		-
13		-		-
14		-		-
15		-		-
16		-		-
17		-		-
18		-		-
19		-		-
20		-		-
21		-		-
22		-		-
23		2		-
24		1		-
25		1		-
26		-		-
27		-		-
28		-		-
29		1		-
30		-		-
31		-		-

* Condition 2 (9)

Table 2C: Number of Laden Trucks - 6:00am to 7:00am

TERALBA QUARRY		Month: Jan-18	
		Westwards**	Eastwards**
		Max Hourly	Max Hourly
Limits*		28	8
Actuals			
1		-	-
2		1	-
3		-	-
4		2	1
5		-	1
6		-	-
7		-	-
8		4	2
9		-	-
10		-	-
11		4	2
12		3	2
13		1	-
14		-	-
15		4	3
16		2	5
17		7	-
18		2	3
19		4	4
20		1	-
21		-	-
22		5	-
23		10	2
24		3	2
25		6	1
26		-	-
27		-	-
28		-	-
29		3	2
30		5	3
31		8	1

* Condition 2 (9)

** Combined Maximum hourly No. of laden trucks = 28

Table 2D: Number of Laden Trucks - 7:00am to 6pm

TERALBA QUARRY		Month:		Jan-18	
	Daily Total	Westwards		Eastwards	
		Daily	Max Hourly	Daily	Max Hourly
Limits	305	220	20	85	8
Actuals					
1	-	-	-	-	-
2	9	1	1	8	2
3	14	7	2	7	2
4	7	3	2	4	2
5	16	2	1	14	4
6	-	-	-	-	-
7	-	-	-	-	-
8	28	19	5	9	3
9	16	4	1	12	3
10	28	7	3	21	4
11	53	30	7	23	6
12	48	21	6	27	6
13	3	2	1	1	1
14	-	-	-	-	-
15	37	15	3	22	4
16	43	28	5	15	4
17	49	29	7	20	5
18	47	31	5	16	4
19	51	17	5	34	8
20	6	0	0	6	2
21	-	-	-	-	-
22	52	24	4	28	6
23	52	28	6	24	4
24	53	27	5	26	6
25	45	26	5	19	4
26	-	-	-	-	-
27	-	-	-	-	-
28	-	-	-	-	-
29	42	23	7	19	4
30	85	45	8	40	7
31	82	53	11	29	8

** PLEASE NOTE: The Hilgited Max Hourly Movements Do Not Relate To Same One Hour Period

Table 2E: Total Number of Laden Trucks

TERALBA QUARRY						Month: Feb-18	
	Daily Total	Max Hourly Daily				Westwards Daily	Eastwards Daily
		6pm to 5am	5am to 6am	6am to 7am	7am to 6pm		
		6	12	28	20		
Limits	326	6	12	28	20	241	85
Actuals							
1	56	2	-	3	12	27	29
2	89	4	-	8	13	59	30
3	13	3	-	1	2	5	8
4	-	-	-	-	-	-	-
5	86	1	1	5	14	40	46
6	73	2	-	3	14	36	37
7	75	1	1	5	11	51	24
8	76	5	-	4	12	44	32
9	61	5	-	3	8	28	33
10	26	3	-	8	5	18	8
11	-	-	-	-	-	-	-
12	67	-	-	8	10	42	25
13	96	1	1	4	16	42	54
14	95	2	-	5	13	37	58
15	122	2	-	8	19	60	62
16	90	3	-	5	14	47	43
17	23	2	1	2	5	9	14
18	-	-	-	-	-	-	-
19	71	2	2	7	9	32	39
20	30	3	-	3	5	17	13
21	81	-	2	2	13	31	50
22	82	3	-	9	9	38	44
23	99	3	-	5	20	55	44
24	20	4	-	2	3	11	9
25	-	-	-	-	-	-	-
26	33	-	2	6	5	21	12
27	45	5	-	2	9	26	19
28	89	4	-	8	11	45	44

Table 2A: Number of Laden Trucks - 6:00pm to 5:00am

TERALBA QUARRY			Month:		Feb-18	
		Daily Total	Westwards		Eastwards	
			Daily	Max Hourly	Daily	Max Hourly
Limits		66	66	6	0	0
Actuals						
1		3	3	2	-	-
2		5	5	4	-	-
3		3	3	3	-	-
4		-	-	-	-	-
5		1	1	1	-	-
6		2	2	2	-	-
7		1	1	1	-	-
8		5	5	5	-	-
9		6	6	5	-	-
10		4	4	3	-	-
11		-	-	-	-	-
12		-	-	-	-	-
13		2	2	1	-	-
14		2	2	2	-	-
15		3	3	2	-	-
16		4	4	3	-	-
17		2	2	2	-	-
18		-	-	-	-	-
19		2	2	2	-	-
20		3	3	3	-	-
21		-	-	-	-	-
22		4	4	3	-	-
23		3	3	3	-	-
24		5	5	4	-	-
25		-	-	-	-	-
26		-	-	-	-	-
27		5	5	5	-	-
28		5	5	4	-	-
					-	-
					-	-
					-	-

Table 2B: Number of Laden Trucks - 5:00am to 6:00am

TERALBA QUARRY		Month:		Feb-18	
		Westwards Max Hourly		Eastwards Max Hourly	
Limits*		12		0	
Actuals					
1		-		-	
2		-		-	
3		-		-	
4		-		-	
5		1		-	
6		-		-	
7		1		-	
8		-		-	
9		-		-	
10		-		-	
11		-		-	
12		-		-	
13		1		-	
14		-		-	
15		-		-	
16		-		-	
17		1		-	
18		-		-	
19		2		-	
20		-		-	
21		2		-	
22		-		-	
23		-		-	
24		-		-	
25		-		-	
26		2		-	
27		-		-	
28		-		-	
				-	
				-	
				-	
				-	

* Condition 2 (9)

Table 2C: Number of Laden Trucks - 6:00am to 7:00am

TERALBA QUARRY		Month: Feb-18	
Limits*	Actuals	Westwards**	Eastwards**
		Max Hourly	Max Hourly
		28	8
	1	2	1
	2	7	1
	3	-	1
	4	-	-
	5	4	1
	6	3	-
	7	5	-
	8	1	3
	9	1	2
	10	5	3
	11	-	-
	12	7	1
	13	3	1
	14	3	2
	15	5	3
	16	2	3
	17	1	1
	18	-	-
	19	3	4
	20	-	3
	21	1	1
	22	5	4
	23	3	2
	24	2	-
	25	-	-
	26	4	2
	27	1	1
	28	3	5

* Condition 2 (9)

** Combined Maximum hourly No. of laden trucks = 28

Table 2D: Number of Laden Trucks - 7:00am to 6pm

TERALBA QUARRY		Month:		Feb-18	
	Daily Total	Westwards		Eastwards	
		Daily	Max Hourly	Daily	Max Hourly
Limits	305	220	20	85	8
Actuals					
1	50	22	5	28	7
2	76	47	9	29	6
3	9	2	1	7	2
4	-	-	-	-	-
5	79	34	6	45	8
6	68	31	6	37	8
7	68	44	8	24	7
8	67	38	7	29	8
9	52	21	5	31	6
10	14	9	3	5	3
11	-	-	-	-	-
12	59	35	6	24	5
13	89	36	8	53	8
14	88	32	6	56	8
15	111	52	11	59	8
16	81	41	7	40	8
17	18	5	2	13	4
18	-	-	-	-	-
19	60	25	4	35	6
20	24	14	3	10	3
21	77	28	5	49	8
22	69	29	7	40	6
23	91	49	12	42	8
24	13	4	2	9	3
25	-	-	-	-	-
26	25	15	3	10	2
27	38	20	4	18	5
28	76	37	5	39	8

** PLEASE NOTE: The Hilighted Max Hourly Movements Do Not Relate To Same One Hour Period

Table 2E: Total Number of Laden Trucks

TERALBA QUARRY						Month:		Mar-18	
		Daily Total		Max Hourly Daily	Max Hourly Daily	Max Hourly Daily	Max Hourly Daily	Westwards Daily	Eastwards Daily
				6pm to 5am	5am to 6am	6am to 7am	7am to 6pm		
Limits		326		6	12	28	20	241	85
Actuals									
	1	95		3	-	10	11	43	52
	2	110		2	-	8	14	62	48
	3	17		3	-	3	3	9	8
	4	-		-	-	-	-	-	-
	5	81		-	2	6	12	52	29
	6	57		3	-	3	10	21	36
	7	89		1	-	5	11	52	37
	8	106		3	-	4	18	57	49
	9	123		2	-	7	19	76	47
	10	24		1	-	1	6	14	10
	11	-		-	-	-	-	-	-
	12	70		-	4	7	9	51	19
	13	104		4	-	5	16	72	32
	14	89		4	-	6	12	38	51
	15	75		2	-	5	12	36	39
	16	93		3	1	7	12	55	38
	17	22		1	-	3	5	13	9
	18	-		-	-	-	-	-	-
	19	92		-	3	4	14	55	37
	20	95		3	-	5	17	63	32
	21	30		4	-	4	6	18	12
	22	30		4	-	2	5	15	15
	23	28		3	-	-	5	17	11
	24	6		2	-	-	1	6	-
	25	-		-	-	-	-	-	-
	26	46		1	3	3	7	24	22
	27	100		3	-	4	17	59	41
	28	121		3	-	9	16	83	38
	29	84		2	-	8	13	51	33
	30	-		-	-	-	-	-	-
	31	-		-	-	-	-	-	-

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Table 2A: Number of Laden Trucks - 6:00pm to 5:00am

TERALBA QUARRY			Month:		Mar-18			
		Daily Total		Westwards			Eastwards	
				Daily	Max Hourly		Daily	Max Hourly
Limits		66		66	6		0	0
Actuals								
1		5		5	3		-	-
2		4		4	2		-	-
3		5		5	3		-	-
4		-		-	-		-	-
5		-		-	-		-	-
6		4		4	3		-	-
7		2		1	1		-	-
8		4		4	3		-	-
9		4		2	2		-	-
10		2		2	1		-	-
11		-		-	-		-	-
12		-		-	-		-	-
13		5		5	4		-	-
14		4		4	4		-	-
15		3		3	2		-	-
16		3		3	3		-	-
17		2		2	1		-	-
18		-		-	-		-	-
19		-		-	-		-	-
20		3		3	3		-	-
21		4		4	4		-	-
22		4		4	4		-	-
23		4		4	3		-	-
24		3		3	2		-	-
25		-		-	-		-	-
26		2		2	1		-	-
27		5		5	3		-	-
28		4		4	3		-	-
29		3		3	2		-	-
30		-		-	-		-	-
31		-		-	-		-	-

Table 2B: Number of Laden Trucks - 5:00am to 6:00am

TERALBA QUARRY		Month:		Mar-18		
		Westwards			Eastwards	
		Max Hourly			Max Hourly	
Limits*		12			0	
Actuals						
1		-		-		
2		-		-		
3		-		-		
4		-		-		
5		2		-		
6		-		-		
7		-		-		
8		-		-		
9		-		-		
10		-		-		
11		-		-		
12		4		-		
13		-		-		
14		-		-		
15		-		-		
16		1		-		
17		-		-		
18		-		-		
19		3		-		
20		-		-		
21		-		-		
22		-		-		
23		-		-		
24		-		-		
25		-		-		
26		3		-		
27		-		-		
28		-		-		
29		-		-		
30		-		-		
31		-		-		

* Condition 2 (9)

Table 2C: Number of Laden Trucks - 6:00am to 7:00am

TERALBA QUARRY		Month:		Mar-18	
		Westwards**		Eastwards**	
		Max Hourly		Max Hourly	
Limits*		28		8	
Actuals					
1		6		4	
2		5		3	
3		1		2	
4		-		-	
5		4		2	
6		-		3	
7		3		2	
8		4		-	
9		5		2	
10		1		-	
11		-		-	
12		7		-	
13		3		2	
14		3		3	
15		3		2	
16		4		3	
17		2		1	
18		-		-	
19		3		1	
20		4		1	
21		3		1	
22		2		-	
23		-		-	
24		-		-	
25		-		-	
26		2		1	
27		2		2	
28		4		5	
29		6		2	
30		-		-	
31		-		-	

* Condition 2 (9)

** Combined Maximum hourly No. of laden trucks = 28

Table 2D: Number of Laden Trucks - 7:00am to 6pm

TERALBA QUARRY		Month:		Mar-18	
	Daily Total	Westwards		Eastwards	
		Daily	Max Hourly	Daily	Max Hourly
Limits	305	220	20	85	8
Actuals					
1	80	32	6	48	8
2	98	53	9	45	7
3	9	3	2	6	2
4	-	-	-	-	-
5	73	46	9	27	5
6	50	17	4	33	8
7	82	47	8	35	6
8	98	49	10	49	8
9	112	67	11	45	8
10	21	11	4	10	3
11	-	-	-	-	-
12	59	40	6	19	5
13	94	64	11	30	7
14	79	31	7	48	7
15	67	30	6	37	8
16	82	47	9	35	7
17	17	9	3	8	2
18	-	-	-	-	-
19	85	49	8	36	7
20	87	56	12	31	6
21	22	11	3	11	3
22	24	9	2	15	3
23	24	13	3	11	2
24	3	3	1	-	-
25	-	-	-	-	-
26	38	17	4	21	4
27	91	52	9	39	8
28	108	75	11	33	6
29	73	42	11	31	7
30	-	-	-	-	-
31	-	-	-	-	-

** PLEASE NOTE: The Hilighted Max Hourly Movements Do Not Relate To Same One Hour Period

Table 2E: Total Number of Laden Trucks

TERALBA QUARRY						Month:		Apr-18
	Daily Total	Max Hourly Daily 6pm to 5am	Max Hourly Daily 5am to 6am	Max Hourly Daily 6am to 7am	Max Hourly Daily 7am to 6pm	Westwards Daily	Eastwards Daily	
Limits	326	6	12	28	20	241	85	
Actuals								
1	-	-	-	-	-	-	-	
2	-	-	-	-	-	-	-	
3	85	5	-	3	12	45	40	
4	83	4	-	4	12	40	43	
5	87	4	-	3	14	54	33	
6	102	2	1	8	14	51	51	
7	15	3	-	2	4	12	3	
8	-	-	-	-	-	-	-	
9	71	1	3	4	12	40	31	
10	96	2	-	7	15	51	45	
11	102	3	-	7	15	61	41	
12	88	3	-	7	12	41	47	
13	99	3	-	8	13	42	57	
14	11	2	1	1	3	9	2	
15	-	-	-	-	-	-	-	
16	123	2	2	10	16	58	65	
17	106	4	-	9	19	59	47	
18	107	5	-	3	14	48	59	
19	113	3	-	8	17	70	43	
20	90	1	-	4	15	62	28	
21	26	2	-	4	5	16	10	
22	-	-	-	-	-	-	-	
23	59	2	2	7	7	36	23	
24	84	3	-	8	11	54	30	
25	-	-	-	-	-	-	-	
26	85	3	-	7	13	52	33	
27	92	2	-	5	17	56	36	
28	9	1	2	1	2	6	3	
29	-	-	-	-	-	-	-	
30	80	2	1	5	13	47	33	

Table 2A: Number of Laden Trucks - 6:00pm to 5:00am

TERALBA QUARRY			Month:		Apr-18	
		Daily Total	Westwards		Eastwards	
			Daily	Max Hourly	Daily	Max Hourly
Limits		66	66	6	0	0
Actuals						
1		-	-	-	-	-
2		-	-	-	-	-
3		5	5	5	-	-
4		5	5	4	-	-
5		5	5	4	-	-
6		2	2	2	-	-
7		3	3	3	-	-
8		-	-	-	-	-
9		1	1	1	-	-
10		4	4	2	-	-
11		3	3	3	-	-
12		5	5	3	-	-
13		5	5	3	-	-
14		3	3	2	-	-
15		-	-	-	-	-
16		2	2	2	-	-
17		4	4	4	-	-
18		5	5	5	-	-
19		4	4	3	-	-
20		1	1	1	-	-
21		3	3	2	-	-
22		-	-	-	-	-
23		3	3	2	-	-
24		5	5	3	-	-
25		-	-	-	-	-
26		3	3	3	-	-
27		3	3	2	-	-
28		1	1	1	-	-
29		-	-	-	-	-
30		2	2	2	-	-
					-	-

Table 2B: Number of Laden Trucks - 5:00am to 6:00am

TERALBA QUARRY		Month:		Apr-18	
		Westwards		Eastwards	
		Max Hourly		Max Hourly	
Limits*		12		0	
Actuals					
1		-		-	
2		-		-	
3		-		-	
4		-		-	
5		-		-	
6		1		-	
7		-		-	
8		-		-	
9		3		-	
10		-		-	
11		-		-	
12		-		-	
13		-		-	
14		1		-	
15		-		-	
16		2		-	
17		-		-	
18		-		-	
19		-		-	
20		-		-	
21		-		-	
22		-		-	
23		2		-	
24		-		-	
25		-		-	
26		-		-	
27		-		-	
28		2		-	
29		-		-	
30		1		-	
				-	

* Condition 2 (9)

Table 2C: Number of Laden Trucks - 6:00am to 7:00am

TERALBA QUARRY		Month:		Apr-18	
		Westwards**		Eastwards**	
		Max Hourly		Max Hourly	
Limits*		28		8	
Actuals					
1		-		-	
2		-		-	
3		2		1	
4		1		3	
5		2		1	
6		6		2	
7		2		-	
8		-		-	
9		2		2	
10		6		1	
11		7		-	
12		5		2	
13		5		3	
14		1		-	
15		-		-	
16		6		4	
17		7		2	
18		2		1	
19		6		2	
20		2		2	
21		1		3	
22		-		-	
23		5		2	
24		4		4	
25		-		-	
26		3		4	
27		3		2	
28		1		-	
29		-		-	
30		3		2	

* Condition 2 (9)

** Combined Maximum hourly No. of laden trucks = 28

Table 2D: Number of Laden Trucks - 7:00am to 6pm

TERALBA QUARRY		Month:		Apr-18	
	Daily Total	Westwards		Eastwards	
		Daily	Max Hourly	Daily	Max Hourly
Limits	305	220	20	85	8
Actuals					
1	-	-	-	-	-
2	-	-	-	-	-
3	77	38	8	39	8
4	74	34	6	40	8
5	79	47	10	32	6
6	91	42	7	49	8
7	10	7	3	3	1
8	-	-	-	-	-
9	63	34	7	29	6
10	85	41	9	44	8
11	92	51	10	41	8
12	76	31	5	45	8
13	86	32	7	54	8
14	6	4	2	2	1
15	-	-	-	-	-
16	109	48	9	61	8
17	93	48	11	45	8
18	99	41	7	58	8
19	101	60	10	41	8
20	85	59	12	26	4
21	19	12	4	7	3
22	-	-	-	-	-
23	47	26	4	21	4
24	71	45	7	26	6
25	-	-	-	-	-
26	75	46	7	29	8
27	84	50	12	34	8
28	5	2	2	3	2
29	-	-	-	-	-
30	72	41	9	31	6

** PLEASE NOTE: The Highlighted Max Hourly Movements Do Not Relate To Same One Hour Period

Table 2E: Total Number of Laden Trucks

TERALBA QUARRY						Month:	May-18
	Daily Total	Max Hourly Daily	Max Hourly Daily	Max Hourly Daily	Max Hourly Daily	Westwards Daily	Eastwards Daily
		6pm to 5am	5am to 6am	6am to 7am	7am to 6pm		
Limits	326	6	12	28	20	241	85
Actuals							
1	106	5	-	5	18	55	51
2	155	4	-	8	20	87	68
3	135	5	-	8	18	79	56
4	141	3	-	9	20	77	64
5	36	3	2	2	9	28	8
6	-	-	-	-	-	-	-
7	94	1	4	6	15	49	45
8	153	4	-	7	20	95	58
9	96	5	-	7	13	46	50
10	147	5	-	9	19	98	49
11	136	3	-	7	18	83	53
12	10	3	1	-	2	6	4
13	-	-	-	-	-	-	-
14	66	2	3	5	11	45	21
15	104	6	-	7	15	55	49
16	120	6	-	7	18	81	39
17	136	3	-	7	20	83	53
18	132	5	-	6	19	77	55
19	25	3	-	3	6	17	8
20	-	-	-	-	-	-	-
21	83	2	4	7	11	53	30
22	188	6	-	17	20	130	58
23	147	-	4	10	17	111	36
24	163	2	-	13	20	136	27
25	126	3	-	13	15	101	25
26	21	4	-	2	3	14	7
27	-	-	-	-	-	-	-
28	212	-	6	15	20	152	60
29	150	5	-	15	20	115	35
30	70	5	-	6	9	39	31
31	70	3	-	8	10	35	35

3022



Table 2A: Number of Laden Trucks - 6:00pm to 5:00am

TERALBA QUARRY		Month:		May-18	
	Daily Total	Westwards		Eastwards	
		Daily	Max Hourly	Daily	Max Hourly
Limits	66	66	6	0	0
Actuals					
1	6	6	5	-	-
2	6	6	4	-	-
3	6	6	5	-	-
4	3	3	3	-	-
5	3	3	3	-	-
6	-	-	-	-	-
7	1	1	1	-	-
8	4	4	4	-	-
9	5	5	5	-	-
10	6	6	5	-	-
11	4	4	3	-	-
12	3	3	3	-	-
13	-	-	-	-	-
14	2	2	2	-	-
15	6	6	6	-	-
16	6	6	6	-	-
17	5	5	4	-	-
18	5	5	5	-	-
19	3	3	3	-	-
20	-	-	-	-	-
21	2	2	2	-	-
22	6	6	6	-	-
23	-	-	-	-	-
24	6	6	5	-	-
25	4	4	3	-	-
26	5	5	4	-	-
27	-	-	-	-	-
28	-	-	-	-	-
29	6	6	5	-	-
30	6	6	5	-	-
31	3	3	3	-	-

Table 2B: Number of Laden Trucks - 5:00am to 6:00am

TERALBA QUARRY		Month:		May-18	
		Westwards		Eastwards	
		Max Hourly		Max Hourly	
Limits*		12		0	
Actuals					
1		-		-	
2		-		-	
3		-		-	
4		-		-	
5		2		-	
6		-		-	
7		4		-	
8		-		-	
9		-		-	
10		-		-	
11		-		-	
12		1		-	
13		-		-	
14		3		-	
15		-		-	
16		-		-	
17		-		-	
18		-		-	
19		-		-	
20		-		-	
21		4		-	
22		-		-	
23		-		-	
24		-		-	
25		-		-	
26		-		-	
27		-		-	
28		6		-	
29		-		-	
30		-		-	
31		-		-	

* Condition 2 (9)

Table 2C: Number of Laden Trucks - 6:00am to 7:00am

TERALBA QUARRY		Month:		May-18	
		Westwards**		Eastwards**	
		Max Hourly		Max Hourly	
Limits*		28		8	
Actuals					
1		3		2	
2		4		4	
3		4		4	
4		3		6	
5		2		-	
6		-		-	
7		4		2	
8		4		3	
9		3		4	
10		8		1	
11		5		2	
12		-		-	
13		-		-	
14		5		-	
15		7		-	
16		5		2	
17		5		2	
18		3		3	
19		2		1	
20		-		-	
21		6		1	
22		12		5	
23		9		1	
24		12		1	
25		12		1	
26		2		-	
27		-		-	
28		13		2	
29		12		3	
30		5		1	
31		2		6	

* Condition 2 (9)

** Combined Maximum hourly No. of laden trucks = 28

Table 2D: Number of Laden Trucks - 7:00am to 6pm

TERALBA QUARRY		Month:		May-18				
		Daily Total		Westwards			Eastwards	
				Daily	Max Hourly		Daily	Max Hourly
Limits				305	220		20	85
Actuals								
1		95		46	10		49	8
2		141		77	12		64	8
3		121		69	10		52	8
4		129		71	12		58	8
5		29		21	6		8	4
6		-		-	-		-	-
7		83		40	8		43	7
8		142		87	12		55	8
9		84		38	8		46	8
10		132		84	14		48	8
11		125		74	11		51	8
12		6		2	1		4	2
13		-		-	-		-	-
14		56		35	7		21	6
15		91		42	7		49	8
16		107		70	13		37	8
17		124		73	15		51	8
18		121		69	13		52	7
19		19		12	3		7	2
20		-		-	-		-	-
21		70		41	8		29	6
22		165		112	14		53	8
23		133		98	16		35	8
24		144		118	17		26	5
25		109		85	12		24	4
26		14		7	3		7	2
27		-		-	-		-	-
28		191		133	17		58	8
29		129		97	13		32	8
30		58		28	5		30	5
31		59		30	8		29	5

Table 2E: Total Number of Laden Trucks

TERALBA QUARRY						Month:		Jun-18	
		Daily Total	Max Hourly Daily				Westwards Daily		Eastwards Daily
			6pm to 5am	5am to 6am	6am to 7am	7am to 6pm			
			6	12	28	20			
Limits		326					241		85
Actuals									
1		77	5	-	9	9	51		26
2		14	1	3	1	3	11		3
3		-	-	-	-	-	-		-
4		56	3	2	3	11	35		21
5		43	3	-	2	6	20		23
6		27	1	2	2	4	17		10
7		50	3	-	5	8	32		18
8		88	2	-	4	14	61		27
9		3	3	-	-	-	3		0
10		-	-	-	-	-	-		-
11		-	-	-	-	-	-		-
12		52	3	1	3	8	59		26
13		77	5	-	3	12	78		32
14		97	3	-	8	16	87		43
15		85	5	-	7	12	69		49
16		21	1	5	2	4	45		9
17		-	-	-	-	-	-		-
18		67	2	2	8	12	44		23
19		22	3	1	4	3	18		4
20		37	6	-	-	7	27		10
21		73	3	-	7	13	55		18
22		86	4	1	4	12	68		18
23		18	1	5	4	4	10		8
24		-	-	-	-	-	-		-
25		111	3	-	6	17	55		56
26		130	3	-	6	20	72		58
27		105	4	-	9	15	59		46
28		66	4	-	6	8	40		26
29		72	4	1	6	11	42		30
30		14	2	1	2	3	7		7

Table 2A: Number of Laden Trucks - 6:00pm to 5:00am

TERALBA QUARRY			Month:		Jun-18	
		Daily Total	Westwards		Eastwards	
			Daily	Max Hourly	Daily	Max Hourly
Limits		66	66	6	0	0
Actuals						
1		5	5	5	-	-
2		1	1	1	-	-
3		-	-	-	-	-
4		4	4	3	-	-
5		4	4	3	-	-
6		2	2	1	-	-
7		3	3	3	-	-
8		4	4	2	-	-
9		3	3	3	-	-
10		-	-	-	-	-
11		-	-	-	-	-
12		4	4	3	-	-
13		6	6	5	-	-
14		5	5	3	-	-
15		5	5	5	-	-
16		1	1	1	-	-
17		-	-	-	-	-
18		4	4	2	-	-
19		4	4	3	-	-
20		6	6	6	-	-
21		4	4	3	-	-
22		4	4	4	-	-
23		1	1	1	-	-
24		-	-	-	-	-
25		4	4	3	-	-
26		3	3	3	-	-
27		4	4	4	-	-
28		5	5	4	-	-
29		4	4	4	-	-
30		3	3	2	-	-
					-	-

Table 2B: Number of Laden Trucks - 5:00am to 6:00am

TERALBA QUARRY		Month:		Jun-18	
		Westwards		Eastwards	
		Max Hourly		Max Hourly	
Limits*		12		0	
Actuals					
1		-		-	
2		3		-	
3		-		-	
4		2		-	
5		-		-	
6		2		-	
7		-		-	
8		-		-	
9		-		-	
10		-		-	
11		-		-	
12		1		-	
13		-		-	
14		-		-	
15		-		-	
16		5		-	
17		-		-	
18		2		-	
19		1		-	
20		-		-	
21		-		-	
22		1		-	
23		5		-	
24		-		-	
25		-		-	
26		-		-	
27		-		-	
28		-		-	
29		1		-	
30		1		-	
				-	
				-	

* Condition 2 (9)

TERALBA QUARRY		Month:		Jun-18	
		Westwards**		Eastwards**	
		Max Hourly		Max Hourly	
Limits*		28		8	
Actuals					
1		7		2	
2		1		-	
3		-		-	
4		3		-	
5		2		-	
6		2		-	
7		4		4	
8		4		-	
9		-		-	
10		-		-	
11		-		-	
12		2		1	
13		3		-	
14		5		3	
15		1		6	
16		-		2	
17		-		-	
18		5		3	
19		4		-	
20		-		-	
21		6		1	
22		4		-	
23		2		2	
24		-		-	
25		4		2	
26		4		2	
27		6		3	
28		3		3	
29		3		3	
30		2		-	

** Combined Maximum hourly No. of laden trucks = 28

Table 2D: Number of Laden Trucks - 7:00am to 6pm

TERALBA QUARRY			Month:		Jun-18	
		Daily Total	Westwards		Eastwards	
			Daily	Max Hourly	Daily	Max Hourly
Limits		305	220	20	85	8
Actuals						
1		63	39	6	24	5
2		9	6	3	3	1
3		-	-	-	-	-
4		47	26	6	21	5
5		37	14	3	23	4
6		21	11	2	10	2
7		42	25	4	17	4
8		80	53	11	27	6
9		-	-	-	-	-
10		-	-	-	-	-
11		-	-	-	-	-
12		44	19	3	25	6
13		68	36	8	32	7
14		84	44	9	40	7
15		73	30	6	43	8
16		13	6	2	7	2
17		-	-	-	-	-
18		53	33	7	20	5
19		13	9	2	4	2
20		31	21	4	10	2
21		62	45	9	17	5
22		77	59	10	18	5
23		8	2	2	6	2
24		-	-	-	-	-
25		101	47	11	54	8
26		121	65	12	56	8
27		92	49	10	43	8
28		55	32	7	23	4
29		61	34	7	27	5
30		8	1	1	7	3

** PLEASE NOTE: The Hilghted Max Hourly Movements Do Not Relate To Same One Hour Period

Table 2E: Total Number of Laden Trucks

TERALBA QUARRY						Month:		Jul-18
	Daily Total	Max Hourly Daily				Westwards Daily		Eastwards Daily
		6pm to 5am	5am to 6am	6am to 7am	7am to 6pm			
		6	12	28	20			
Limits	326					241		85
Actuals								
1	-	-	-	-	-	-		-
2	78	1	3	2	11	52		26
3	83	5	-	7	12	55		28
4	87	5	-	8	12	56		31
5	122	2	-	8	18	64		58
6	107	3	-	6	16	75		32
7	20	2	1	4	4	17		3
8	-	-	-	-	-	-		-
9	111	1	3	6	20	63		48
10	138	2	1	10	20	88		50
11	167	2	-	9	20	109		58
12	173	2	-	7	20	110		63
13	171	3	-	10	20	108		63
14	23	2	1	6	6	17		6
15	-	-	-	-	-	-		-
16	104	1	1	6	16	76		28
17	129	2	-	2	20	96		33
18	112	3	-	8	17	66		46
19	137	4	-	10	19	87		50
20	88	3	-	10	12	51		37
21	14	1	3	2	2	11		3
22	-	-	-	-	-	-		-
23	106	3	2	10	17	67		39
24	100	5	-	9	16	60		40
25	100	5	-	3	17	59		41
26	95	3	-	7	17	56		39
27	101	4	-	8	14	72		29
28	25	1	-	4	8	10		15
29	-	-	-	-	-	-		-
30	106	-	6	5	15	62		44
31	102	6	-	7	12	54		48

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Table 2A: Number of Laden Trucks - 6:00pm to 5:00am

TERALBA QUARRY			Month:		Jul-18	
		Daily Total	Westwards		Eastwards	
			Daily	Max Hourly	Daily	Max Hourly
Limits		66	66	6	0	0
Actuals						
1		-	-	-	-	-
2		1	1	1	-	-
3		5	5	5	-	-
4		5	5	5	-	-
5		2	2	2	-	-
6		3	3	3	-	-
7		2	2	2	-	-
8		-	-	-	-	-
9		2	2	1	-	-
10		3	3	2	-	-
11		3	3	2	-	-
12		3	3	2	-	-
13		3	3	3	-	-
14		2	2	2	-	-
15		-	-	-	-	-
16		2	2	1	-	-
17		3	3	2	-	-
18		4	4	3	-	-
19		4	4	4	-	-
20		3	3	3	-	-
21		2	2	1	-	-
22		-	-	-	-	-
23		3	3	3	-	-
24		6	6	5	-	-
25		6	6	5	-	-
26		4	4	3	-	-
27		5	5	4	-	-
28		1	1	1	-	-
29		-	-	-	-	-
30		-	-	-	-	-
31		6	6	6	-	-

Table 2B: Number of Laden Trucks - 5:00am to 6:00am

TERALBA QUARRY		Month:		Jul-18	
		Westwards		Eastwards	
		Max Hourly		Max Hourly	
Limits*		12		0	
Actuals					
1		-		-	
2		3		-	
3		-		-	
4		-		-	
5		-		-	
6		-		-	
7		1		-	
8		-		-	
9		3		-	
10		1		-	
11		-		-	
12		-		-	
13		-		-	
14		1		-	
15		-		-	
16		1		-	
17		-		-	
18		-		-	
19		-		-	
20		-		-	
21		3		-	
22		-		-	
23		2		-	
24		-		-	
25		-		-	
26		-		-	
27		-		-	
28		-		-	
29		-		-	
30		6		-	
31		-		-	

* Condition 2 (9)

Table 2C: Number of Laden Trucks - 6:00am to 7:00am

TERALBA QUARRY		Month:		Jul-18	
		Westwards**		Eastwards**	
		Max Hourly		Max Hourly	
Limits*		28		8	
Actuals					
1		-		-	
2		2		-	
3		7		-	
4		5		3	
5		5		3	
6		6		-	
7		4		-	
8		-		-	
9		3		3	
10		6		4	
11		7		2	
12		3		4	
13		6		4	
14		5		1	
15		-		-	
16		6		-	
17		2		-	
18		6		2	
19		8		2	
20		6		4	
21		2		-	
22		-		-	
23		7		3	
24		5		4	
25		2		1	
26		6		1	
27		7		1	
28		3		1	
29		-		-	
30		4		1	
31		4		3	

* Condition 2 (9)

** Combined Maximum hourly No. of laden trucks = 28

Table 2D: Number of Laden Trucks - 7:00am to 6pm

TERALBA QUARRY		Month:		Jul-18		
		Daily Total	Westwards		Eastwards	
			Daily	Max Hourly	Daily	Max Hourly
Limits		305	220	20	85	8
Actuals						
1		-	-	-	-	-
2		72	46	7	26	6
3		71	43	7	28	6
4		74	46	9	28	7
5		112	57	10	55	8
6		98	66	13	32	8
7		13	10	3	3	1
8		-	-	-	-	-
9		100	55	13	45	8
10		124	78	12	46	8
11		155	99	15	56	8
12		163	104	14	59	8
13		158	99	17	59	8
14		14	9	3	5	3
15		-	-	-	-	-
16		95	67	10	28	7
17		124	91	14	33	6
18		100	56	10	44	8
19		123	75	15	48	8
20		75	42	9	33	5
21		7	4	2	3	2
22		-	-	-	-	-
23		91	55	12	36	7
24		85	49	9	36	8
25		91	51	11	40	8
26		84	46	11	38	8
27		88	60	10	28	5
28		20	6	4	14	4
29		-	-	-	-	-
30		95	52	11	43	8
31		89	44	7	45	7

** PLEASE NOTE: The Hilighted Max Hourly Movements Do Not Relate To Same One Hour Period

Table 2E: Total Number of Laden Trucks

TERALBA QUARRY						Month: Aug-18	
	Daily Total	Max Hourly Daily 6pm to 5am	Max Hourly Daily 5am to 6am	Max Hourly Daily 6am to 7am	Max Hourly Daily 7am to 6pm	Westwards Daily	Eastwards Daily
Limits	326	6	12	28	20	241	85
Actuals							
1	106	1	1	9	14	66	40
2	89	2	1	7	14	60	29
3	85	2	1	9	11	50	35
4	19	1	2	1	4	10	9
5	-	-	-	-	-	-	-
6	87	3	2	6	11	56	31
7	80	5	1	5	11	49	31
8	93	4	-	8	13	50	43
9	97	6	-	8	11	45	52
10	98	3	1	7	14	60	38
11	19	2	2	4	3	12	7
12	-	-	-	-	-	-	-
13	71	1	2	7	11	33	38
14	101	5	-	10	12	46	55
15	116	4	-	10	16	69	47
16	128	2	-	10	18	76	52
17	129	-	1	13	18	67	62
18	23	3	1	4	5	16	7
19	-	-	-	-	-	-	-
20	98	2	3	8	12	59	39
21	124	4	-	11	17	76	48
22	106	4	-	8	15	59	47
23	100	3	-	7	12	44	56
24	97	4	-	10	13	63	34
25	13	-	3	4	2	8	5
26	-	-	-	-	-	-	-
27	66	4	1	1	9	30	36
28	73	4	-	3	9	29	44
29	66	4	-	7	11	33	33
30	121	4	-	9	16	64	57
31	124	4	-	9	19	69	55

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Table 2A: Number of Laden Trucks - 6:00pm to 5:00am

TERALBA QUARRY		Month:		Aug-18	
	Daily Total	Westwards		Eastwards	
		Daily	Max Hourly	Daily	Max Hourly
Limits	66	66	6	0	0
Actuals					
1	1	1	1	-	-
2	3	3	2	-	-
3	3	3	2	-	-
4	2	2	1	-	-
5	-	-	-	-	-
6	3	3	3	-	-
7	5	5	5	-	-
8	5	5	4	-	-
9	6	6	6	-	-
10	5	5	3	-	-
11	2	2	2	-	-
12	-	-	-	-	-
13	2	2	1	-	-
14	5	5	5	-	-
15	5	5	4	-	-
16	4	4	2	-	-
17	-	-	-	-	-
18	3	3	3	-	-
19	-	-	-	-	-
20	3	3	2	-	-
21	5	5	4	-	-
22	5	5	4	-	-
23	4	4	3	-	-
24	5	5	1	-	-
25	-	-	-	-	-
26	-	-	-	-	-
27	4	4	4	-	-
28	4	4	4	-	-
29	4	4	4	-	-
30	4	4	4	-	-
31	4	4	4	-	-

Table 2B: Number of Laden Trucks - 5:00am to 6:00am

TERALBA QUARRY		Month:		Aug-18		
		Westwards			Eastwards	
		Max Hourly			Max Hourly	
	Limits*	12			0	
	Actuals					
	1	1			-	
	2	1			-	
	3	1			-	
	4	2			-	
	5	-			-	
	6	2			-	
	7	1			-	
	8	-			-	
	9	-			-	
	10	1			-	
	11	2			-	
	12	-			-	
	13	2			-	
	14	-			-	
	15	-			-	
	16	-			-	
	17	1			-	
	18	1			-	
	19	-			-	
	20	3			-	
	21	-			-	
	22	-			-	
	23	-			-	
	24	-			-	
	25	3			-	
	26	-			-	
	27	1			-	
	28	-			-	
	29	-			-	
	30	-			-	
	31	-			-	

* Condition 2 (9)

Table 2C: Number of Laden Trucks - 6:00am to 7:00am

TERALBA QUARRY		Month:		Aug-18	
		Westwards**		Eastwards**	
		Max Hourly		Max Hourly	
Limits*		28		8	
Actuals					
1		6		3	
2		6		1	
3		7		2	
4		-		1	
5		-		-	
6		6		-	
7		3		2	
8		8		-	
9		5		3	
10		5		2	
11		2		2	
12		-		-	
13		5		2	
14		4		6	
15		7		3	
16		7		3	
17		9		4	
18		2		2	
19		-		-	
20		8		-	
21		5		6	
22		6		2	
23		5		2	
24		8		2	
25		2		2	
26		-		-	
27		1		-	
28		2		1	
29		6		1	
30		6		3	
31		8		1	

* Condition 2 (9)

** Combined Maximum hourly No. of laden trucks = 28

Table 2D: Number of Laden Trucks - 7:00am to 6pm

TERALBA QUARRY		Month:		Aug-18	
	Daily Total	Westwards		Eastwards	
		Daily	Max Hourly	Daily	Max Hourly
Limits	305	220	20	85	8
Actuals					
1	93	58	9	37	5
2	78	50	11	28	4
3	72	39	8	33	7
4	14	6	3	8	3
5	-	-	-	-	-
6	76	45	7	31	6
7	69	40	7	29	5
8	80	37	6	43	7
9	83	34	5	49	8
10	85	49	10	36	8
11	11	6	2	5	2
12	-	-	-	-	-
13	60	24	4	36	7
14	86	37	7	49	8
15	101	57	9	44	8
16	114	65	11	49	8
17	115	57	10	58	8
18	15	10	4	5	2
19	-	-	-	-	-
20	84	45	7	39	5
21	108	66	12	42	8
22	93	48	10	45	7
23	89	35	6	54	8
24	82	50	9	32	5
25	6	3	1	3	2
26	-	-	-	-	-
27	60	24	5	36	7
28	66	23	4	43	8
29	55	23	4	32	8
30	108	54	10	54	8
31	111	57	11	54	8

** PLEASE NOTE: The Hilighted Max Hourly Movements Do Not Relate To Same One Hour Period

Table 2E: Total Number of Laden Trucks

TERALBA QUARRY						Month: Sep-18	
	Daily Total	Max Hourly Daily 6pm to 5am	Max Hourly Daily 5am to 6am	Max Hourly Daily 6am to 7am	Max Hourly Daily 7am to 6pm	Westwards Daily	Eastwards Daily
Limits	326	6	12	28	20	241	85
Actuals							
1	14	2	2	1	3	8	6
2	-	-	-	-	-	-	-
3	69	1	2	5	13	34	35
4	38	2	1	4	10	25	13
5	35	1	3	3	6	16	19
6	64	3	-	6	9	28	36
7	61	3	-	6	12	31	30
8	6	2	-	-	3	5	1
9	-	-	-	-	-	-	-
10	83	3	3	1	11	56	27
11	137	3	-	8	17	90	47
12	150	3	-	11	20	82	68
13	115	4	-	11	14	52	63
14	84	3	1	6	12	46	38
15	27	3	1	4	5	21	6
16	-	-	-	-	-	-	-
17	132	-	6	10	19	72	60
18	127	1	7	7	19	83	44
19	146	6	1	8	20	90	56
20	127	2	-	10	20	65	62
21	106	2	1	6	17	71	35
22	18	1	3	3	3	12	6
23	-	-	-	-	-	-	-
24	77	2	3	2	15	56	21
25	87	4	-	5	13	57	30
26	91	1	-	5	14	43	48
27	132	3	-	7	20	77	55
28	94	1	-	6	12	47	47
29	16	2	1	1	4	8	8
30	-	-	-	-	-	-	-

Table 2A: Number of Laden Trucks - 6:00pm to 5:00am

TERALBA QUARRY			Month:		Sep-18			
		Daily Total		Westwards			Eastwards	
				Daily	Max Hourly		Daily	Max Hourly
Limits		66		66	6		0	0
Actuals								
1		2		2	2		-	-
2		-		-	-		-	-
3		2		2	1		-	-
4		3		3	2		-	-
5		1		1	1		-	-
6		3		3	3		-	-
7		3		3	3		-	-
8		2		2	2		-	-
9		-		-	-		-	-
10		3		3	3		-	-
11		4		4	3		-	-
12		4		4	3		-	-
13		5		5	4		-	-
14		4		4	3		-	-
15		3		3	3		-	-
16		-		-	-		-	-
17		-		-	-		-	-
18		1		1	1		-	-
19		6		6	6		-	-
20		3		3	2		-	-
21		3		3	2		-	-
22		2		2	1		-	-
23		-		-	-		-	-
24		2		2	2		-	-
25		5		5	4		-	-
26		2		2	1		-	-
27		4		4	3		-	-
28		2		2	1		-	-
29		2		2	2		-	-
30		-		-	-		-	-
							-	-
							-	-

Table 2B: Number of Laden Trucks - 5:00am to 6:00am

TERALBA QUARRY		Month:		Sep-18
		Westwards		Eastwards
		Max Hourly		Max Hourly
Limits*		12		0
Actuals				
1		2		-
2		-		-
3		2		-
4		1		-
5		3		-
6		-		-
7		-		-
8		-		-
9		-		-
10		3		-
11		-		-
12		-		-
13		-		-
14		1		-
15		1		-
16		-		-
17		6		-
18		7		-
19		1		-
20		-		-
21		1		-
22		3		-
23		-		-
24		3		-
25		-		-
26		-		-
27		-		-
28		-		-
29		1		-
30		-		-

* Condition 2 (9)

Table 2C: Number of Laden Trucks - 6:00am to 7:00am

TERALBA QUARRY		Month: Sep-18	
		Westwards**	Eastwards**
		Max Hourly	Max Hourly
Limits*		28	8
Actuals			
1		1	-
2		-	-
3		5	-
4		3	1
5		2	1
6		4	2
7		5	1
8		-	-
9		-	-
10		-	1
11		6	2
12		7	4
13		7	4
14		4	2
15		4	-
16		-	-
17		5	5
18		5	2
19		6	2
20		5	5
21		5	1
22		2	1
23		-	-
24		1	1
25		2	3
26		2	3
27		5	2
28		4	2
29		1	1
30		-	-

* Condition 2 (9)

** Combined Maximum hourly No. of laden trucks = 28

Table 2D: Number of Laden Trucks - 7:00am to 6pm

TERALBA QUARRY			Month:		Sep-18	
		Daily Total	Westwards		Eastwards	
			Daily	Max Hourly	Daily	Max Hourly
Limits		305	220	20	85	8
Actuals						
1		9	3	2	6	3
2		-	-	-	-	-
3		60	25	5	35	8
4		30	18	6	12	4
5		28	10	2	18	6
6		55	21	3	34	7
7		52	23	4	29	8
8		4	3	2	1	1
9		-	-	-	-	-
10		76	50	9	26	6
11		125	80	12	45	8
12		135	71	12	64	8
13		99	40	6	59	8
14		73	37	8	36	7
15		19	13	5	6	2
16		-	-	-	-	-
17		116	61	11	55	8
18		112	70	11	42	8
19		131	77	14	54	8
20		114	57	12	57	8
21		96	62	12	34	7
22		10	5	2	5	3
23		-	-	-	-	-
24		70	50	10	20	5
25		77	50	9	27	5
26		84	39	11	45	7
27		121	68	14	53	8
28		86	41	8	45	8
29		11	4	2	7	2
30		-	-	-	-	-

** PLEASE NOTE: The Hilighted Max Hourly Movements Do Not Relate To Same One Hour Period

Table 2E: Total Number of Laden Trucks

TERALBA QUARRY						Month:	Oct-18		
		Daily Total		Max Hourly Daily	Max Hourly Daily	Max Hourly Daily	Max Hourly Daily	Westwards Daily	Eastwards Daily
				6pm to 5am	5am to 6am	6am to 7am	7am to 6pm		
Limits		326		6	12	28	20	241	85
Actuals									
1		-		-	-	-	-	-	-
2		82		1	1	4	12	34	48
3		81		3	-	6	11	46	35
4		50		4	-	6	8	29	21
5		18		2	1	-	3	10	8
6		-		-	-	-	-	-	-
7		-		-	-	-	-	-	-
8		23		3	1	3	3	16	7
9		68		4	1	3	9	42	26
10		51		2	3	1	10	31	20
11		32		4	-	1	5	21	11
12		56		4	1	3	8	37	19
13		15		3	1	4	2	13	2
14		-		-	-	-	-	-	-
15		78		1	2	8	12	42	36
16		76		2	-	8	10	40	36
17		63		4	-	5	8	20	43
18		71		3	1	5	12	49	22
19		77		2	-	9	14	45	32
20		16		1	2	3	5	13	3
21		-		-	-	-	-	-	-
22		64		2	1	8	12	28	36
23		97		3	-	8	18	73	24
24		92		4	-	11	16	60	32
25		69		3	-	9	10	39	30
26		86		2	1	9	16	49	37
27		16		2	-	3	4	12	4
28		-		-	-	-	-	-	-
29		63		2	3	9	10	34	29
30		125		3	1	11	18	81	44
31		77		3	1	9	9	56	21

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Table 2A: Number of Laden Trucks - 6:00pm to 5:00am

TERALBA QUARRY		Month:		Oct-18		
		Daily Total	Westwards		Eastwards	
			Daily	Max Hourly	Daily	Max Hourly
Limits		66	66	6	0	0
Actuals						
1		-	-	-	-	-
2		2	2	1	-	-
3		3	3	3	-	-
4		4	4	4	-	-
5		2	2	2	-	-
6		-	-	-	-	-
7		-	-	-	-	-
8		5	5	3	-	-
9		5	5	4	-	-
10		2	2	2	-	-
11		4	4	4	-	-
12		5	5	4	-	-
13		4	4	3	-	-
14		-	-	-	-	-
15		1	1	1	-	-
16		3	3	2	-	-
17		4	4	4	-	-
18		4	4	3	-	-
19		2	2	2	-	-
20		1	1	1	-	-
21		-	-	-	-	-
22		3	3	2	-	-
23		4	4	3	-	-
24		4	4	4	-	-
25		3	3	3	-	-
26		3	3	2	-	-
27		3	3	2	-	-
28		-	-	-	-	-
29		2	2	2	-	-
30		4	4	3	-	-
31		4	4	3	-	-

Table 2B: Number of Laden Trucks - 5:00am to 6:00am

TERALBA QUARRY		Month:		Oct-18
		Westwards		Eastwards
		Max Hourly		Max Hourly
Limits*		12		0
Actuals				
1		-		-
2		1		-
3		-		-
4		-		-
5		1		-
6		-		-
7		-		-
8		1		-
9		1		-
10		3		-
11		-		-
12		1		-
13		1		-
14		-		-
15		2		-
16		-		-
17		-		-
18		1		-
19		-		-
20		2		-
21		-		-
22		1		-
23		-		-
24		-		-
25		-		-
26		1		-
27		-		-
28		-		-
29		3		-
30		1		-
31		1		-

* Condition 2 (9)

Table 2C: Number of Laden Trucks - 6:00am to 7:00am

TERALBA QUARRY		Month:	Oct-18
		Westwards**	Eastwards**
		Max Hourly	Max Hourly
Limits*		28	8
Actuals			
1		-	-
2		1	3
3		4	2
4		5	1
5		-	-
6		-	-
7		-	-
8		3	-
9		3	-
10		-	1
11		-	1
12		2	1
13		4	-
14		-	-
15		6	2
16		5	3
17		2	3
18		5	-
19		8	1
20		3	-
21		-	-
22		6	2
23		7	1
24		11	-
25		8	1
26		7	2
27		3	-
28		-	-
29		8	1
30		7	4
31		8	1

* Condition 2 (9)

** Combined Maximum hourly No. of laden trucks = 28

Table 2D: Number of Laden Trucks - 7:00am to 6pm

TERALBA QUARRY		Month:		Oct-18	
	Daily Total	Westwards		Eastwards	
		Daily	Max Hourly	Daily	Max Hourly
Limits	305	220	20	85	8
Actuals					
1	-	-	-	-	-
2	75	30	4	45	8
3	72	39	10	33	6
4	40	20	5	20	4
5	15	7	3	8	3
6	-	-	-	-	-
7	-	-	-	-	-
8	14	7	3	7	2
9	59	33	8	26	6
10	45	26	6	19	4
11	27	17	5	10	3
12	47	29	5	18	3
13	6	4	1	2	1
14	-	-	-	-	-
15	67	33	7	34	6
16	65	32	7	33	6
17	54	14	3	40	6
18	61	39	10	22	4
19	66	35	6	31	8
20	10	7	4	3	1
21	-	-	-	-	-
22	52	18	4	34	8
23	85	62	13	23	5
24	77	45	10	32	6
25	57	28	7	29	7
26	73	38	8	35	8
27	10	6	3	4	1
28	-	-	-	-	-
29	49	21	3	28	8
30	109	69	14	40	7
31	63	43	11	20	5

** PLEASE NOTE: The Hilgited Max Hourly Movements Do Not Relate To Same One Hour Period

Table 2E: Total Number of Laden Trucks

TERALBA QUARRY						Month: Nov-18	
	Daily Total	Max Hourly Daily	Max Hourly Daily	Max Hourly Daily	Max Hourly Daily	Westwards Daily	Eastwards Daily
		6pm to 5am	5am to 6am	6am to 7am	7am to 6pm		
Limits	326	6	12	28	20	241	85
Actuals							
1	93	3	-	9	15	44	49
2	90	5	-	4	15	41	49
3	34	2	2	5	7	17	17
4	-	-	-	-	-	-	-
5	60	2	3	5	11	30	30
6	66	4	1	8	11	49	17
7	64	4	2	4	12	38	26
8	60	4	-	3	11	43	17
9	79	5	-	11	11	47	32
10	22	3	1	4	4	13	9
11	-	-	-	-	-	-	-
12	104	1	2	7	15	56	48
13	107	3	-	11	13	45	62
14	79	3	1	9	12	52	27
15	76	1	-	6	13	43	33
16	75	2	-	8	11	41	34
17	19	3	-	2	4	10	9
18	-	-	-	-	-	-	-
19	76	2	4	6	12	54	22
20	122	2	-	5	17	59	63
21	89	3	-	7	13	44	45
22	83	4	-	9	12	59	24
23	68	3	-	8	9	52	16
24	20	2	3	1	4	10	10
25	-	-	-	-	-	-	-
26	77	2	3	4	11	43	34
27	121	3	1	11	17	70	51
28	34	2	-	3	10	22	2
29	42	3	-	-	6	28	14
30	95	3	-	4	15	44	51

Table 2A: Number of Laden Trucks - 6:00pm to 5:00am

TERALBA QUARRY			Month:		Nov-18	
		Daily Total	Westwards		Eastwards	
			Daily	Max Hourly	Daily	Max Hourly
Limits		66	66	6	0	0
Actuals						
1		4	4	3	-	-
2		5	5	5	-	-
3		2	2	2	-	-
4		-	-	-	-	-
5		2	2	2	-	-
6		4	4	4	-	-
7		4	4	4	-	-
8		5	5	4	-	-
9		6	6	5	-	-
10		4	4	3	-	-
11		-	-	-	-	-
12		1	1	1	-	-
13		5	5	3	-	-
14		4	4	3	-	-
15		2	2	1	-	-
16		3	3	2	-	-
17		3	3	3	-	-
18		-	-	-	-	-
19		2	2	2	-	-
20		4	4	2	-	-
21		3	3	3	-	-
22		6	6	4	-	-
23		3	3	2	-	-
24		2	2	2	-	-
25		-	-	-	-	-
26		2	2	2	-	-
27		4	4	3	-	-
28		2	2	2	-	-
29		3	3	3	-	-
30		4	4	3	-	-

Table 2B: Number of Laden Trucks - 5:00am to 6:00am

TERALBA QUARRY		Month:		Nov-18		
		Westwards			Eastwards	
		Max Hourly			Max Hourly	
Limits*		12			0	
Actuals						
1		-			-	
2		-			-	
3		2			-	
4		-			-	
5		3			-	
6		1			-	
7		2			-	
8		-			-	
9		-			-	
10		1			-	
11		-			-	
12		2			-	
13		-			-	
14		1			-	
15		-			-	
16		-			-	
17		-			-	
18		-			-	
19		4			-	
20		-			-	
21		-			-	
22		-			-	
23		-			-	
24		3			-	
25		-			-	
26		3			-	
27		1			-	
28		-			-	
29		-			-	
30		-			-	

* Condition 2 (9)

Table 2C: Number of Laden Trucks - 6:00am to 7:00am

TERALBA QUARRY		Month:		Nov-18	
		Westwards**		Eastwards**	
		Max Hourly		Max Hourly	
Limits*		28		8	
Actuals					
1		8		1	
2		2		2	
3		2		3	
4		-		-	
5		4		1	
6		6		2	
7		4		-	
8		3		-	
9		6		5	
10		3		1	
11		-		-	
12		5		2	
13		7		4	
14		5		4	
15		4		2	
16		6		2	
17		2		-	
18		-		-	
19		2		4	
20		1		4	
21		5		2	
22		8		1	
23		8		-	
24		1		-	
25		-		-	
26		3		1	
27		8		3	
28		2		1	
29		-		-	
30		1		3	

* Condition 2 (9)

** Combined Maximum hourly No. of laden trucks = 28

Table 2D: Number of Laden Trucks - 7:00am to 6pm

TERALBA QUARRY		Month:		Nov-18		
		Daily Total	Westwards		Eastwards	
			Daily	Max Hourly	Daily	Max Hourly
Limits		305	220	20	85	8
Actuals						
1		80	32	8	48	7
2		81	34	7	47	8
3		25	11	3	14	4
4		-	-	-	-	-
5		50	21	5	29	7
6		53	38	7	15	4
7		54	28	5	26	7
8		52	35	10	17	6
9		62	35	6	27	6
10		13	5	3	8	3
11		-	-	-	-	-
12		94	48	8	46	8
13		91	33	5	58	8
14		65	42	11	23	6
15		68	37	9	31	5
16		64	32	6	32	6
17		14	5	3	9	3
18		-	-	-	-	-
19		64	46	9	18	3
20		113	54	9	59	8
21		79	36	6	43	8
22		68	45	9	23	5
23		57	41	7	16	4
24		14	4	2	10	3
25		-	-	-	-	-
26		68	35	6	33	7
27		105	57	11	48	8
28		29	18	7	11	3
29		39	25	5	14	4
30		87	39	7	48	8

** PLEASE NOTE: The Hilighted Max Hourly Movements Do Not Relate To Same One Hour Period

Table 2E: Total Number of Laden Trucks

TERALBA QUARRY						Month:		Dec-18	
		Daily Total		Max Hourly Daily	Max Hourly Daily	Max Hourly Daily	Max Hourly Daily	Westwards Daily	Eastwards Daily
				6pm to 5am	5am to 6am	6am to 7am	7am to 6pm		
Limits		326		6	12	28	20	241	85
Actuals									
1		18		2	2	2	5	7	11
2		-		-	-	-	-	-	-
3		52		3	2	3	8	34	18
4		126		5	1	12	20	77	49
5		123		6	-	6	20	82	41
6		97		3	-	8	14	58	39
7		97		4	-	8	16	54	43
8		17		2	3	4	4	13	4
9		-		-	-	-	-	-	-
10		91		3	2	8	13	41	50
11		117		4	1	6	21	71	46
12		94		3	-	4	17	68	26
13		110		5	-	5	17	68	42
14		108		3	-	9	19	71	37
15		32		3	-	5	7	24	8
16		-		-	-	-	-	-	-
17		94		2	3	7	16	59	35
18		83		2	1	8	12	30	53
19		110		2	-	10	18	60	50
20		74		4	-	6	15	43	31
21		53		4	-	7	12	30	23
22		-		-	-	-	-	-	-
23		-		-	-	-	-	-	-
24		-		-	-	-	-	-	-
25		-		-	-	-	-	-	-
26		-		-	-	-	-	-	-
27		-		-	-	-	-	-	-
28		-		-	-	-	-	-	-
29		-		-	-	-	-	-	-
30		-		-	-	-	-	-	-
31		-		-	-	-	-	-	-

Table 2A: Number of Laden Trucks - 6:00pm to 5:00am

TERALBA QUARRY			Month:		Dec-18			
		Daily Total		Westwards			Eastwards	
			Daily	Max Hourly	Daily	Max Hourly		
Limits		66		66	6		0	0
Actuals								
	1	2	2	2	2	-	-	
	2	-	-	-	-	-	-	
	3	3	3	3	3	-	-	
	4	5	5	3	3	-	-	
	5	6	6	4	4	-	-	
	6	5	5	3	3	-	-	
	7	5	5	4	4	-	-	
	8	2	2	2	2	-	-	
	9	-	-	-	-	-	-	
	10	3	3	3	3	-	-	
	11	5	5	4	4	-	-	
	12	5	5	3	3	-	-	
	13	6	6	5	5	-	-	
	14	5	5	3	3	-	-	
	15	4	4	3	3	-	-	
	16	-	-			-	-	
	17	2	2	2	2	-	-	
	18	2	2	2	2	-	-	
	19	3	3	2	2	-	-	
	20	6	6	4	4	-	-	
	21	6	6	4	4	-	-	
	22	-	-	-	-	-	-	
	23	-	-	-	-	-	-	
	24	-	-	-	-	-	-	
	25	-	-	-	-	-	-	
	26	-	-	-	-	-	-	
	27	-	-	-	-	-	-	
	28	-	-	-	-	-	-	
	29	-	-	-	-	-	-	
	30	-	-	-	-	-	-	
	31	-	-	-	-	-	-	

Table 2B: Number of Laden Trucks - 5:00am to 6:00am

TERALBA QUARRY		Month:		Dec-18
		Westwards		Eastwards
		Max Hourly		Max Hourly
Limits*		12		0
Actuals				
1		2		-
2		-		-
3		2		-
4		1		-
5		-		-
6		-		-
7		-		-
8		3		-
9		-		-
10		2		-
11		1		-
12		-		-
13		-		-
14		-		-
15		-		-
16		-		-
17		3		-
18		1		-
19		-		-
20		-		-
21		-		-
22		-		-
23		-		-
24		-		-
25		-		-
26		-		-
27		-		-
28		-		-
29		-		-
30		-		-
31		-		-

* Condition 2 (9)

Table 2C: Number of Laden Trucks - 6:00am to 7:00am

TERALBA QUARRY

Month:

Dec-18

		Westwards**		Eastwards**
		Max Hourly		Max Hourly
Limits*		28		8
Actuals				
1		2		-
2		-		-
3		3		-
4		7		5
5		5		1
6		3		5
7		4		4
8		3		1
9		-		-
10		7		1
11		3		3
12		-		4
13		3		2
14		8		1
15		5		-
16		-		-
17		5		2
18		2		6
19		6		4
20		1		5
21		4		3
22		-		-
23		-		-
24		-		-
25		-		-
26		-		-
27		-		-
28		-		-
29		-		-
30		-		-
31		-		-

* Condition 2 (9)

** Combined Maximum hourly No. of laden trucks = 28

Table 2D: Number of Laden Trucks - 7:00am to 6pm

TERALBA QUARRY		Month:		Dec-18	
	Daily Total	Westwards		Eastwards	
		Daily	Max Hourly	Daily	Max Hourly
Limits	305	220	20	85	8
Actuals					
1	13	1	1	11	4
2	-	-	-	-	-
3	44	26	5	18	3
4	108	64	12	44	8
5	121	71	12	40	8
6	84	50	7	34	7
7	84	45	9	39	7
8	8	5	3	3	1
9	-	-	-	-	-
10	78	29	5	49	8
11	105	62	13	43	8
12	85	63	10	22	7
13	99	59	9	40	8
14	94	58	12	36	7
15	23	15	5	8	2
16	-	-	-	-	-
17	83	49	8	33	8
18	72	25	6	47	6
19	97	51	10	46	8
20	62	36	9	26	6
21	40	20	7	20	5
22	-	-	-	-	-
23	-	-	-	-	-
24	-	-	-	-	-
25	-	-	-	-	-
26	-	-	-	-	-
27	-	-	-	-	-
28	-	-	-	-	-
29	-	-	-	-	-
30	-	-	-	-	-
31	-	-	-	-	-

** PLEASE NOTE: The Hilgited Max Hourly Movements Do Not Relate To Same One Hour Period

MONTHLY TRANSPORT TONNAGES					
TERALBA QUARRY			Number of Tonnes		
Routes	1	2	3/4.		
01-December-2018	32.18	90.56	230.72		
02-December-2018	-	-	-		
03-December-2018	225.22	516.32	415.72		
04-December-2018	457.02	1359.10	794.38		
05-December-2018	584.60	1482.22	592.24		
06-December-2018	387.30	1031.12	908.44		
07-December-2018	364.24	791.00	793.64		
08-December-2018	33.20	295.26	56.06		
09-December-2018	-	-	-		
10-December-2018	367.08	607.08	930.38		
11-December-2018	519.44	1268.88	1098.90		
12-December-2018	278.04	1391.80	614.30		
13-December-2018	219.62	1465.90	903.04		
14-December-2018	459.62	1237.76	722.06		
15-December-2018	191.22	437.50	184.58		
16-December-2018	-	-	-		
17-December-2018	435.64	789.42	834.42		
18-December-2018	195.16	456.16	1271.06		
19-December-2018	191.06	997.86	1243.52		
20-December-2018	260.88	639.28	711.78		
21-December-2018	69.00	597.90	469.46		
22-December-2018	-	-	-		
23-December-2018	-	-	-		
24-December-2018	-	-	-		
25-December-2018	-	-	-		
26-December-2018	-	-	-		
27-December-2018	-	-	-		
28-December-2018	-	-	-		
29-December-2018	-	-	-		
30-December-2018	-	-	-		
31-December-2018	-	-	-		
Totals	5270.52	15455.12	12774.70		

1 - Northwest

33500.34

2 - Southwest

3 - Eastward



Metromix Teralba Quarry - Deposited Dust Monitoring Results

Year	RHONDA RD			MYRTLE ST			HILLSIDE CRES			RODGERS ST			MARGARET ST		
Unit	Total Insoluble Solids	Ash Fraction	% Ash	Total Insoluble Solids	Ash Fraction	% Ash	Total Insoluble Solids	Ash Fraction	% Ash	Total Insoluble Solids	Ash Fraction	% Ash	Total Insoluble Solids	Ash Fraction	% Ash
EPA Approved Level	4.0	gm ² /month		4.0	gm ² /month		4.0	gm ² /month		4.0	gm ² /month		4.0	gm ² /month	
2004	1.3	0.9	73	0.9	0.6	70	2.5	1.3	68						
2005	1.4	0.9	69	1.3	0.7	58	1.4	0.7	54						
2006	1.0	0.6	67	2.0	1.1	50	0.9	0.5	57						
2007	1.1	0.7	65	0.9	0.5	56	1.0	0.5	56						
2008	1.0	0.6	61	0.9	0.5	63	1.0	0.5	50						
2009	1.4	0.9	63	1.4	1.0	65	2.1	1.3	54						
2010	1.1	0.8	72	0.7	0.5	74	1.0	0.4	44						
2011	1.0	0.7	73	1.1	0.5	51	1.1	0.5	53	1.0	0.7	60	0.8	0.7	74
2012	0.8	0.5	62	0.9	0.6	66	1.4	0.5	35	1.0	0.7	74	1.2	0.7	71
2013	0.9	0.5	59	0.9	0.6	66	1.3	0.6	46	1.0	0.7	74	1.2	0.7	71
2014	0.9	0.5	60	0.9	0.5	60	1.3	0.8	32	1.9	1.3	51	1.0	0.8	62
2015	1.0	0.5	50	1.2	0.8	68	1.7	1.0	54	0.9	0.6	66	1.0	0.7	64
2016	0.9	0.5	62	1.2	0.7	61	1.8	1.1	61	0.8	0.5	67.3	1.1	0.7	66.6
2017	0.9	0.45	49	1.5	1.0	62.49	2.0	1.1	53	1.8	1.1	57.2	1.2	0.7	57.7
2018	0.9	0.53	56	1.0	0.6	65.06	2.1	1.2	52.38	1.11	0.80	58.29	1.14	0.78	69.28
Average (All Years)	1.0	0.6	64	1.2	0.7	62	1.5	0.8	62	1.2	0.8	66	1.1	0.7	66



2019 Results
07-Jan-19

=Monitoring did not occur at this location until 2011.



Teralba Quarry – PM10 Monitoring Data Summary

Date	Metromix PM10 24 Hr	Monthly Average	Year to Date Annual Average	24hr Max Criteria	Annual Average Max Criteria
01/01/18	17		17.0	50	30
07/01/18	31		24.0	50	30
13/01/18	26		24.7	50	30
19/01/18	19		23.3	50	30
25/01/18	16		21.8	50	30
31/01/18	20	21.5	21.5	50	30
06/02/18	6		19.3	50	30
12/02/18	25		20.0	50	30
18/02/18	17		19.7	50	30
24/02/18	10	14.5	18.7	50	30
02/03/18	18		18.6	50	30
08/03/18	6		17.6	50	30
14/03/18	9		16.9	50	30
20/03/18	43		18.8	50	30
26/03/18	9	17.0	18.1	50	30
01/04/18	15		17.9	50	30
07/04/18	8		17.4	50	30
13/04/18	24		17.7	50	30
19/04/18	10		17.3	50	30
25/04/18	9	13.2	16.9	50	30
01/05/18	11		16.6	50	30
07/05/18	19		16.7	50	30
13/05/18	11		16.5	50	30
19/05/18	15		16.4	50	30
25/05/18	12		16.2	50	30
31/05/18	7	12.5	15.9	50	30
06/06/18	3		15.4	50	30
12/06/18	4		15.0	50	30
18/06/18	3		14.6	50	30
24/06/18	9		14.4	50	30
30/06/18	5	4.8	14.1	50	30
06/07/18	15		14.1	50	30
12/07/18	13		14.1	50	30
18/07/18	45		15.0	50	30
24/07/18	25		15.3	50	30
30/07/18	13	22.2	15.2	50	30
05/08/18	27		15.5	50	30
11/08/18	18		15.6	50	30
17/08/18	15		15.6	50	30
23/08/18	10		15.5	50	30
29/08/18	11	16.2	15.3	50	30
04/09/18	4		15.1	50	30
10/09/18	11		15.0	50	30
16/09/18	18		15.0	50	30
22/09/18	17		15.1	50	30
28/09/18	16	13.2	15.1	50	30
04/10/18	11		15.0	50	30
10/10/18	13		15.0	50	30
16/10/18	21		15.1	50	30
22/10/18	13		15.1	50	30
28/10/18	16	14.8	15.1	50	30
03/11/18	37		15.5	50	30
09/11/18	15		15.5	50	30
15/11/18	17		15.5	50	30
21/11/18	63		16.4	50	30
27/11/18	32	32.8	16.7	50	30
03/12/18	33		16.9	50	30
09/12/18	31		17.2	50	30
15/12/18	20		17.2	50	30
21/12/18	16		17.2	50	30
27/12/18	22	24.4	17.3	50	30
Current 2018	PM10				
Average	17.3				
Standard Deviation	11.0				
Minimum	3.0				
Maximum	63.0				
Count	61				

Water Monitoring - Teralba Quarry - 2018 - EPA Point No.4 - Adit Overflow					
Date		pH	Conductivity	TSS	Oil & Grease
	Guideline	6.5 to 8.5 units	125 - 2200 ^a	<50	5
	Sample No.	Total (Unfiltered)			
January 2018	EPA No 4 - 148 ABCDE	7.1	2160	<5	<5
February 2018	EPA No 4 - 149 ABCDE	7.17	2280	7	<5
March 2018	EPA No 4 - 150 ABCDE	7.19	2430	<5	<5
April 2018	EPA No 4 - 151 AB	7.17	2270	16	<5
May 2018	EPA No 4 - 152 AB	7.31	2090	<5	<5
June 2018	EPA No 4 - 153 AB	7.22	2150	<5	<5
July 2018	EPA No 4 - 154 AB	8.07	2010	9	<5
August 2018	EPA No 4 - 155 AB	7.5	2030	8	<5
September 2018	EPA No 4 - 156 AB	7.37	2230	<5	<5
October 2018	EPA No 4 - 157 AB	7.15	2090	6	<5
November 2018	EPA No 4 - 158 AB	7.34	2020	<5	<5
December 2018	EPA No 4 - 159 AB	7.12	2080	<5	<5

^a Based on ANZECC Guidelines slightly disturbed lowland river ecosystems in south-east Australia (ANZECC 2000)

Water Monitoring - Teralba Quarry - 2018 - EPA Point No. 5 - Overflow Dam B					
Date		pH	Conductivity	TSS	Oil & Grease
	Guideline	6.5 to 8.5 units	125 - 2200 ^a	<50	5
	Sample No.	Total (Unfiltered)			
January 2018			No Water Discharged		
February 2018			No Water Discharged		
March 2018			No Water Discharged		
April 2018			No Water Discharged		
May 2018			No Water Discharged		
June 2018			No Water Discharged		
July 2018			No Water Discharged		
August 2018			No Water Discharged		
September 2018			No Water Discharged		
October 2018	EPA No 5 - 218 AB	6.88	1220	<5	<5
November 2018			No Water Discharged		
December 2018			No Water Discharged		

^a Based on ANZECC Guidelines slightly disturbed lowland river ecosystems in south-east Australia (ANZECC 2000)

Daily Discharge EPA No.6				
Date	Metromix Sample No.	pH	Suspended Solids (mg/L)	Comments
Jan-18	No Water Discharge at EPA Point 6			
Feb-18	No Water Discharge at EPA Point 6			
Mar-18	No Water Discharge at EPA Point 6			
Apr-18	No Water Discharge at EPA Point 6			
May-18	No Water Discharge at EPA Point 6			
Jun-18	No Water Discharge at EPA Point 6			
Jul-18	No Water Discharge at EPA Point 6			
Aug-18	No Water Discharge at EPA Point 6			
Sep-18	No Water Discharge at EPA Point 6			
Oct-18	No Water Discharge at EPA Point 6			
Nov-18	No Water Discharge at EPA Point 6			
Dec-18	No Water Discharge at EPA Point 6			

Daily Discharge EPA No.7				
Date	Metromix Sample No.	pH	Suspended Solids (mg/L)	Comments
Jan-18	No Water Discharge at EPA Point 7			
Feb-18	No Water Discharge at EPA Point 7			
Mar-18	No Water Discharge at EPA Point 7			
Apr-18	No Water Discharge at EPA Point 7			
May-18	No Water Discharge at EPA Point 7			
Jun-18	No Water Discharge at EPA Point 7			
Jul-18	No Water Discharge at EPA Point 7			
Aug-18	No Water Discharge at EPA Point 7			
Sep-18	No Water Discharge at EPA Point 7			
Oct-18	No Water Discharge at EPA Point 7			
Nov-18	No Water Discharge at EPA Point 7			
Dec-18	No Water Discharge at EPA Point 7			

Daily Rainfall

	Daily Rainfall (mm)											
Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0	0.8	0	0	0.2	0	0		0	0	0	0
2	0	7.8	0	0.4	0	21	0.6		0	0	0	0
3	4	7	0	0.4	0	5.6	0.6		9.6	0	0	0
4	0	0	2.6	13	0	3.4	0		47.2	69.6	0	0
5	0	0	0	0	0	18.6	0.2		7.6	44.2	0	1
6	0	0	31.2	0	0	8.2	0		0.2	26.2	0	0
7	0	0	3.4	0.2	0	0.8	0		8.2	1	4.6	0
8	6.8	0	0	0	0	0.6	0		0	0.8	10.4	0
9	5.2	1.2	4.6	0	0	2.8	0		0.2	0.2	0	0
10	0.8	0	0	0	0	20	0		0	47	0	0.2
11	0	1.2	0	0	0	8	0	0	0	2	0	3.2
12	0	0	0	0	0	0	0	0	0	2	0	1
13	1.8	2.4	0	0	3	0	0	0	0	7.4	0	12
14	2	0	0.2	0	0.8	0	0	0	0	2.2	0	2.2
15	2.8	0	0	0	0	0	0	0	0	1.2	12	25
16	0.2	0	0	0	0	0	0	0	0	0	1.2	63.8
17	0	0	0	2.6	0	0	0	0	0	0.8	0	0.2
18	0	0	0	0	0	3.4	0	0	0	0.4	0.4	0
19	0	0	0	16	0	44.6	0	0	0	0.4	0	4.8
20	0	31	1.2	0.2	0	6.6	0	0	2	17.8	0	1.4
21	0	0.2	167.4	0.2	0	3.6	0	0	0	1	0	2.4
22	0	0	32.6	0	0	0.2	0	0	0	0.2	0	2.2
23	0	0	8	0	0	0.2	0	0	0	0	0	3.6
24	0	0	0.2	0	0	0	0	0	4	0	0	0
25	0	27.4	0	10	0	0	0	17	0.4	0	0	0
26	0	58.2	9.6	0.2	0	0	0	3.4	2.4	0	0	0
27	0	0.4	0	1.6	0	2	0	0	0.2	0	0	0
28	0	0	0	4.6	0	15.2	0	0.2	0	3.8	70.2	0
29	0		0	7.6	0	0		0	0	0	1.6	0
30	0		0	2.6	5.4	0.2		0	0	0	0	0
31	2.8		0		0			2.8		0		2.6
Total	26.4	137.6	261	59.6	9.4	165	1.4*	20.6*	82	228.2	100.4	125.6
Annual Total												1217.2
* Incomplete data												



18 September 2018

Ref: 8413/8043

Metromix Pty Ltd
150 Rhondda Road
Teralba NSW 2284

AUGUST 2018 NOISE MONITORING RESULTS – TERALBA QUARRY

This letter report presents the results of attended noise monitoring conducted for the Metromix operated Teralba Quarry (TQ) commencing on Tuesday 28th and finishing on Thursday 30th of August, 2018. Noise monitoring was carried out in accordance with the conditions of the TQ Noise Management Plan (NMP) as shown in extract on page 2 (referenced from EPL 536).

Although the project approval nominates noise criteria at nine locations, Metromix recognises that meaningful monitoring data will be collected from the closest locations to the active operational areas. As a result of this, and as outlined within the approved NMP, for periods when operations are confined to areas south of Rhondda Road, noise monitoring will be undertaken at Locations EPL-A, B, D, E and H.

Further to this, location EPL-C and EPL-F have been omitted from the noise monitoring programme given they are not required as other monitoring locations are nearby and closer to quarry related noise sources. This has been recognised by the EPA by the removal of these locations from the monitoring locations detailed in EPL 536. **Table 1** lists the address and coordinates of each noise monitoring location, with the relevant monitoring locations that were monitored during the August 2018 period highlighted in **bold**. The locations are shown on the figure in **Appendix I**.

Table 1 Noise Monitoring Locations (from PA 10-0183)			
Location in EPL	Address	Easting	Northing
EPL-A	Awaba Street, Teralba	369080	3651470
EPL-B ¹	Rhondda Road, Teralba	369250	6351915
EPL-C	Rhondda Road, Teralba ²	369205	6352015
EPL-D	Rhondda Road, Teralba	369150	6352135
EPL-E	Victoria Avenue, Teralba	369060	6352620
EPL-F	Victoria Avenue, Teralba ²	369130	6352945
EPL-H	School Road, Wakefield	366210	6352520

1. See text in relation to changes to monitoring location
2. Metromix has obtained permission for this monitoring location to be omitted.



Teralba Quarry Noise Monitoring – August 2018

It is noted that during the period when monitoring is undertaken at Location B, Metromix is required to provide a spotter to record the number of trucks departing from the Quarry and not the Teralba Business Park. Spectrum Acoustics personnel undertook identification of quarry trucks as part of the noise monitoring procedure.

As part of pre monitoring protocols Spectrum Acoustics notified, by letterbox drop, all landowners in the close vicinity of each site of the impending monitoring. The resident at Location B has previously told Metromix that he doesn't want monitoring to be done near his residence so monitoring was undertaken at a point approximately 30m south (as shown in Appendix I).

The following presents paraphrased noise-related conditions of EPL 536 relevant to the compliance noise monitoring programme.

Condition	Requirement																																								
L5.2	<div>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.</div> <table><tr><th>Location</th><th>Day Shoulder 6:00am - 7:00am</th><th>Day 7:00am - 6:00pm</th><th>Evening 6:00pm – 10:00pm</th><th>Night 10:00pm – 6:00am</th></tr><tr><td></td><td>L_{Aeq} (15 minute)</td><td>L_{Aeq} (15 minute)</td><td>L_{Aeq} (15 minute)</td><td>L_{Aeq} (15 minute)</td></tr><tr><td>EPL-A (Point 12)</td><td>38</td><td>38</td><td>37</td><td>35</td></tr><tr><td>EPL-B (Point 13)</td><td>42</td><td>46</td><td>36</td><td>45</td></tr><tr><td>EPL-C (Point 14)</td><td>42</td><td>42</td><td>35</td><td>35</td></tr><tr><td>EPL-D, EPL-E, EPL-H (Point 15, 16 and 18)</td><td>35</td><td>35</td><td>35</td><td>35</td></tr><tr><td>EPL-F (Point 17)</td><td>37</td><td>38</td><td>38</td><td>35</td></tr><tr><td></td><td></td><td></td><td></td><td>45</td></tr></table> <div>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.</div>	Location	Day Shoulder 6:00am - 7:00am	Day 7:00am - 6:00pm	Evening 6:00pm – 10:00pm	Night 10:00pm – 6:00am		L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	EPL-A (Point 12)	38	38	37	35	EPL-B (Point 13)	42	46	36	45	EPL-C (Point 14)	42	42	35	35	EPL-D, EPL-E, EPL-H (Point 15, 16 and 18)	35	35	35	35	EPL-F (Point 17)	37	38	38	35					45
Location	Day Shoulder 6:00am - 7:00am	Day 7:00am - 6:00pm	Evening 6:00pm – 10:00pm	Night 10:00pm – 6:00am																																					
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)																																					
EPL-A (Point 12)	38	38	37	35																																					
EPL-B (Point 13)	42	46	36	45																																					
EPL-C (Point 14)	42	42	35	35																																					
EPL-D, EPL-E, EPL-H (Point 15, 16 and 18)	35	35	35	35																																					
EPL-F (Point 17)	37	38	38	35																																					
				45																																					
L5.3	<div>For the purposes of Condition L5.2:</div> <div><div>a) Day-Shoulder is defined as the period between 6am to 7am Monday to Saturday.</div><div>b) Day is defined as:<div><div>a. the period from 7am to 6pm Monday to Saturday; and</div><div>b. the period from 8am to 6pm Sundays and Public Holidays.</div></div></div><div>c) Evening is defined as the period from 6pm to 10pm.</div><div>d) Night is defined as:<div><div>a. the period from 10pm to 7am Monday to Saturday; and</div><div>b. the period from 10pm to 8am Sundays and Public Holidays.</div></div></div></div>																																								
L5.4	<div>The contributed noise level from the premises must not exceed the noise limits specified within EPL 536 at the most noise-affected point on or within the boundary of any residential premises to the north and/or south of the premises, except as expressly provided by this licence, or by the EPA in writing.</div>																																								
L5.5	<div>The noise limits set out in conditions L5.2 apply under all meteorological conditions except for anyone of the following:</div> <div><div>a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or</div><div>b) Stability category F temperature inversion conditions and wind speeds greater the 2 metres/second at 10 metres above ground level; or</div><div>c) Stability category G temperature inversion conditions.</div></div>																																								
L5.6	<div>For the purpose of condition L5.5:</div>																																								





Teralba Quarry Noise Monitoring – August 2018

	<p>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.</p> <p>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 <i>NSW industrial Noise Policy (EPA 2000)</i></p> <p>Note: The weather station must be designed, commissioned and operated in a manner to obtain the necessary parameters required under the above condition.</p>																
L5.7	<p>To determine compliance:</p> <p>1. With the $L_{Aeq(15\text{ min})}$ noise limits in condition L5.2, the licensee must locate noise monitoring equipment;</p> <p>a) approximately on the boundary, where any dwelling is situated 30 metres or less from the property boundary that is closest to the premises; or,</p> <p>b) 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; or where applicable</p> <p>c) within approximately 50 metres if the boundary of a national park or nature reserve.</p> <p>2. With the $LA1(1\text{ minute})$ noise limits in condition L5.2, the noise monitoring equipment must be located within 1 metre of a dwelling facade.</p> <p>3. With the noise limits in condition L5.2, the noise monitoring equipment must be located;</p> <p>a) at the most affected point at a location where there is no dwelling at the location, or</p> <p>b) at the most affected point within an area at a location prescribed by conditions L5.7 1(a) or L5.7 1(b).</p>																
L5.8	<p>A non-compliance will still occur where noise generated from the premises in excess of the appropriate noise limit is measured:</p> <p>a) at a location other than an area prescribed by the conditions of this licence, and /or</p> <p>b) at a point other than the most affected point at a location.</p>																
L5.9	<p>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.</p>																
L5.10	<p>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.</p>																
L7.1	<p>The licensee must comply with the operating hours specified in Column 2, Column 3, and Column 4 of the table below:</p> <table><tr><th>Day</th><th>Loading and Dispatch of Quarry Trucks</th><th>Extraction and Processing</th><th>Receipt of Concrete</th></tr><tr><td>Monday - Friday</td><td>4:00am Monday to midnight Friday</td><td>7:00am to 7:00pm</td><td>7:00am to 5:00pm</td></tr><tr><td>Saturday</td><td>Midnight Friday to 6:00pm Saturday</td><td>7:00am to 2:00pm</td><td>7:00am to 2:00pm</td></tr><tr><td>Sundays and Public Holidays</td><td>None</td><td>none</td><td>none</td></tr></table> <p>Note: Maintenance activities may occur at any time provided they are inaudible at privately-owned residence.</p> <p>*VENM = Virgin Excavated Natural Material</p> <p>**ENM = Excavated Natural Material</p>	Day	Loading and Dispatch of Quarry Trucks	Extraction and Processing	Receipt of Concrete	Monday - Friday	4:00am Monday to midnight Friday	7:00am to 7:00pm	7:00am to 5:00pm	Saturday	Midnight Friday to 6:00pm Saturday	7:00am to 2:00pm	7:00am to 2:00pm	Sundays and Public Holidays	None	none	none
Day	Loading and Dispatch of Quarry Trucks	Extraction and Processing	Receipt of Concrete														
Monday - Friday	4:00am Monday to midnight Friday	7:00am to 7:00pm	7:00am to 5:00pm														
Saturday	Midnight Friday to 6:00pm Saturday	7:00am to 2:00pm	7:00am to 2:00pm														
Sundays and Public Holidays	None	none	none														





NOISE MEASUREMENTS

Attended noise monitoring was conducted with Brüel & Kjær Type 2250 Precision Sound Analysers. These instruments have Type 1 characteristics as defined in AS1259-1982 "Sound Level Meters" and have current NATA calibration. Field calibration of each instrument was carried out at the start and end of each monitoring period.

The noise monitoring was conducted in general accordance with the requirements of Section 9 of the NMP (Noise Monitoring Protocol and Evaluation of Compliance) as follows;

"Metromix proposes to adopt a noise monitoring protocol that provides feedback on the effectiveness of the noise control measures and demonstrate compliance with the conditions within the Project Approval 10_0183 and Environment Protection Licence 0536.

The approach to monitoring compliance is based substantially upon Metromix's experience to date which has identified the on-site activities have not been the source of noise complaints or any recorded non-compliance. Hence, it is considered the monitoring program needs to reflect this fact."

A-weighted noise levels were measured over 15 minute monitoring periods with data acquired at 1 second statistical intervals and the meter set to "fast" response. Each 1 second measurement is accompanied by a third-octave band spectrum from 20 - 20k Hz which is required for analysing INP 'modifying factors'. Time based field notes allow for determination of the relative contributions to the overall noise level of all significant noise sources.

The worst case 15 minute Leq noise level for each monitoring period is shown in the tables below. Where the noise from TQ was audible, Brüel & Kjær "Evaluator" analysis software was used to quantify the contributions of the quarry and other significant noise sources to the overall level. Quarry noise from TQ is shown in the tables in bold type. Where noise from TQ is listed as faintly audible, this means the noise levels from the quarry were at least 10 dB below the ambient level during the measurement and not measurable.

Noise levels were recorded for each of the L10, Leq, Lmax, L1, L90 and Lmin percentiles. All noise levels shown in the tables of results are in dB(A) Leq (15 min). Levels for the other percentiles are not shown as they have no compliance criteria for comparison but are available on request.

Meteorological data used in this report was obtained from the quarry-operated weather station at the site.

Noise Compliance Assessment

The results of the noise measurements undertaken throughout the various time periods are provided in **Tables 2 to 16**. EPL 536 refers to the various time periods as follows:

- a) Day-Shoulder is defined as the period between 6am to 7am Monday to Saturday.
- b) Day is defined as:
 - (i) the period from 7am to 6pm Monday to Saturday; and





Teralba Quarry Noise Monitoring – August 2018

- (ii) the period from 8am to 6pm Sundays and Public Holidays.
- c) Evening is defined as the period from 6pm to 10pm.
- d) Night is defined as:
 - (i) the period from 10pm to 7am Monday to Saturday; and
 - (ii) the period from 10pm to 8am Sundays and Public Holidays.

Table 2 Teralba Quarry Noise Monitoring Results – 28 August 2018 Night					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	5:35 am	43	35	1.9 / 234	Traffic (42), birds (33), TQ inaudible
B	4:30 am	48	35	1.9 / 220	Traffic (44), trains (43), Insects (41), TQ inaudible
D	4:31 am	42	35	1.9 / 220	Wind (39), Traffic (38), TQ inaudible
E	5:33 am	42	35	1.9 / 234	Birds (40), traffic (35), TQ inaudible
H	5:01 am	38	35	1.8 / 228	Traffic (36), birds (30), TQ inaudible

Table 3 Teralba Quarry Noise Monitoring Results – 28 August 2018 Day Shoulder					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	6:41 am	49	38	1.6 / 237	Traffic (45), train (44), Birds (42), TQ inaudible
B	6:23 am	48	42	1.6 / 241	Traffic (45), industrial noise (45), TQ (28) ¹
D	6:41 am	52	35	1.6 / 237	Traffic (50), birds (44), industrial noise (33), TQ inaudible
E	6:34 am	40	35	1.2 / 249	Birds (38), traffic (32), TQ inaudible
H	6:01 am	43	35	1.8 / 238	Traffic (440), birds (39), TQ inaudible
Note: 1 See text description and analysis					

Table 4 Teralba Quarry Noise Monitoring Results – 28 August 2018 Day					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	7:45 am	49	38	1.9 / 229	Traffic (45), trains (44), birds (42), TQ inaudible
B	9:17 am	60	46	1.6 / 219	Traffic (59), train (50), wind (40), TQ (27) ¹
D	4:26 pm	52	35	1.8 / 139	Traffic (52), birds (40), TQ inaudible
E	7:40 am	41	35	1.9 / 231	Birds (38), traffic (37), TQ inaudible
H	9:30 am	43	35	1.9 / 225	Birds (41), Traffic (36), TQ inaudible
Note: 1 See text description and analysis					





Teralba Quarry Noise Monitoring – August 2018

Table 5 Teralba Quarry Noise Monitoring Results – 28 August 2018 Evening					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	6:23 pm	43	37	0.6 / 174	Trains (42), industry (35), TQ inaudible
B	7:33 pm	55	36	0.7 / 191	Trains (54), traffic (45), TQ inaudible
D	8:11 pm	49	35	1.0 / 207	Traffic (49), birds (36), TQ inaudible
E	6:56 pm	47	35	0.8 / 166	Train (45), traffic (41), TQ inaudible
H	8:50 pm	37	35	1.0 / 230	Traffic (36), insects (28), TQ barely audible

Table 6 Teralba Quarry Noise Monitoring Results – 29 August 2018 Night					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	5:39 am	47	35	0.7 / 230	Traffic (45), trains (42), TQ inaudible
B	4:34 am	50	35	0.5 / 219	Traffic (48), train (45), TQ inaudible
D	4:30 am	36	35	0.5 / 219	Traffic (34), birds (27), TQ inaudible
E	5:33 am	43	35	0.7 / 230	Birds (42), traffic (33), TQ inaudible
H	5:04 am	36	35	0.4 / 123	Traffic (34), birds (27), TQ inaudible

Table 7 Teralba Quarry Noise Monitoring Results – 29 August 2018 Day Shoulder					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	6:39 am	57	38	0.7 / 105	Traffic (53), industrial noise (52), dog (50), TQ inaudible
B	6:28 am	52	42	0.7 / 293	Industrial noise (50), Traffic (44), TQ (30) ¹
D	8:08 am	46	35	1.0 / 281	Traffic (44), birds (40), industrial noise (27), TQ inaudible
E	6:34 am	42	35	0.7 / 105	Birds (39), traffic (38), TQ inaudible
H	6:05 am	45	35	0.7 / 262	Traffic (44), birds (37), TQ inaudible
Note: 1 See text description and analysis					





Teralba Quarry Noise Monitoring – August 2018

Table 8 Teralba Quarry Noise Monitoring Results – 29 August 2018 Day					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/direction	Identified Noise Sources (Leq (15 min))
A	4:06 pm	47	38	1.6 / 145	Birds (45), industrial noise (40), traffic (38), TQ inaudible
B	4:37 pm	55	46	1.6 / 168	Traffic (52), trains (48), TQ (28) ¹
D	8:00 am	47	35	1.2 / 239	Traffic (45), birds (37), industrial noise (35), TQ occasionally audible
E	7:45 am	45	35	1.0 / 296	Traffic (44), birds (36), TQ inaudible
H	9:40 am	48	35	1.5 / 212	Birds (47), traffic (40), TQ inaudible
Note: 1 See text description and analysis					

Table 9 Teralba Quarry Noise Monitoring Results – 29 August 2018 Evening					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/direction	Identified Noise Sources (Leq (15 min))
A	6:39 pm	44	37	0.9 / 190	Dog (41), train (40), TQ barely audible
B	6:01 pm	55	36	0.8 / 165	Traffic (52), train (50), TQ inaudible
D	6:40 pm	44	35	0.6 / 197	Traffic (44), TQ inaudible
E	7:16 pm	43	35	0.5 / 224	Traffic (43), TQ inaudible
H	6:05 pm	38	35	1.0 / 194	Traffic (37), birds (30), TQ inaudible

Table 10 Teralba Quarry Noise Monitoring Results – 30 August 2018 Night					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/direction	Identified Noise Sources (Leq (15 min))
A	5:40 am	40	35	0.8 / 298	Traffic (39), train (30), TQ inaudible
B	4:33 am	52	35	0.5 / 263	Traffic (51), trains (42), TQ inaudible
D	4:31 am	37	35	0.5 / 263	Traffic (37), birds (30), TQ inaudible
E	5:36 am	44	35	1.1 / 298	Traffic (41), birds (40), TQ inaudible
H	5:01 am	40	35	0.8 / 298	Traffic (37), birds (33), frogs (30), TQ inaudible





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Table 11 Teralba Quarry Noise Monitoring Results – 30 August 2018 Day Shoulder					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/direction	Identified Noise Sources (Leq (15 min))
A	6:31 am	47	38	1.1 / 296	Traffic (45), birds (40), Industrial noise (35), TQ inaudible
B	6:28 am	51	42	1.2 / 311	Industrial noise (48), traffic (45), train (40), TQ inaudible
D	6:45 am	47	35	1.0 / 284	Traffic (45), birds (38), Industrial noise (34), TQ inaudible
E	6:38 am	40	35	0.8 / 298	Birds (38), traffic (33), TQ inaudible
H	6:03 am	50	35	1.1 / 310	Birds (48), traffic (43), TQ inaudible

Table 12 Teralba Quarry Noise Monitoring Results – 30 August 2018 Day					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/direction	Identified Noise Sources (Leq (15 min))
A	7:04 am	48	38	0.9 / 290	Traffic (44), industrial noise (42), trains (41), TQ inaudible
B	4:29 pm	50	46	1.3 / 129	Traffic (48), trains (43), TQ (24) ¹
D	8:00 am	48	35	0.8 / 282	Traffic (45), birds (44), TQ inaudible
E	10:02 am	34	35	1.0 / 165	Birds (32), traffic (28), TQ inaudible
H	9:36 am	44	35	1.6 / 224	Birds (42), Traffic (35), TQ inaudible
Note: 1 See text description and analysis					

Table 13 Teralba Quarry Noise Monitoring Results – 30 August 2018 Evening					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/direction	Identified Noise Sources (Leq (15 min))
A	6:37 pm	56	37	0.5 / 138	Traffic (53), trains (52), TQ inaudible
B	6:02 pm	53	36	0.7 / 107	Traffic (48), car (50), TQ inaudible
D	6:36 pm	38	35	0.8 / 128	Traffic (36), industrial (30), TQ inaudible
E	7:11 pm	40	35	0.2 / 114	Traffic (39), train (32), TQ inaudible
H	6:00 pm	37	35	0.7 / 107	Traffic (33), insects (32), birds (30), TQ (<20)

The results presented in Tables 2 to 13 indicate that, under the operational and atmospheric conditions at the time of monitoring, noise emissions from TQ did not exceed the relevant criterion at any monitoring location during any part of the survey.

Monitoring location EPL-B is situated close to the corner of Rhondda Road and Railway Street. This monitoring location is included predominantly to measure quarry noise generated by trucks exiting the site along the private section of the access road (through the Teralba Business Park). From the monitoring location it was possible to determine which trucks were associated with the quarry and a dedicated spotter was not required during this monitoring period.





Teralba Quarry Noise Monitoring – August 2018

When measuring noise at the EPL-B location, the noise emissions from the exiting quarry trucks (whilst on the private section of the access road) was measured and the worst case 15 minute Leq noise level calculated based on the time each truck was on the private road. The worst case calculated Leq level for the trucks is that shown for Location B in Tables 2 to 13.

At location EPL-D the acoustic environment is significantly influenced by noise from traffic on Rhondda Rd, trains and other industries within the vicinity. Noise emissions from the batching plant which is located adjacent to TQ contributed to the received noise during some monitoring periods.

Data from those times where TQ operations were audible were analysed using the “Evaluator” software. This analysis showed the noise did not contain any tonal, impulsive or low frequency components as per definitions of “modifying factor corrections” in the NSW Industrial Noise Policy.

In addition to the operational noise, the noise from TQ must not exceed **45 dB(A) L1 (1 min)** within the night-time period i.e. between the hours of 10 pm and 7 am, in accordance with *Condition L4.1* of EPL 536. This is to minimise the potential for sleep disturbance as a result of individual loud noises from the quarry. The compliance measurement locations are different for each of the operational and sleep disturbance noise. That is, the sleep disturbance criterion is typically applicable at 1m from the façade of a bedroom window.

To avoid undue disturbance to residents, the L1 (1 min) noise level from the operational measurements are used to show general compliance with the sleep disturbance criterion. That is, as the distance between the noise source and the operational noise monitoring location is significantly greater than the distance between the operational noise monitoring location and the sleep disturbance monitoring location (i.e. 1m from the façade of the house) there will be little variation in L1 (1 min) levels between the two monitoring locations. It must be noted, however, that the sleep disturbance criterion is to be measured near a bedroom window. As the internal layout of each residence is not known, to consider a worst case, a bedroom window is assumed to be facing the operational noise monitoring location.

The results of the sleep disturbance measurements are shown in **Tables 14 to 16**.

Table 14 Teralba Quarry (L1 (1min)) Noise Monitoring Results –28 August 2018 (Night)					
Location	Time	dB(A), L ₁ (1minute)	Wind speed/ direction	L _{A1} source	Identified Quarry Sources (L ₁ (1 min))
A	5:35 am	52	1.9 / 234	Birds	n/a
B	4:30 am	66	1.9 / 220	Traffic	n/a
D	4:31 am	56	1.9 / 220	Traffic	n/a
E	5:33 am	55	1.9 / 234	Birds	n/a
H	5:01 am	53	1.8 / 228	Birds	n/a





Teralba Quarry Noise Monitoring – August 2018

Table 15 Teralba Quarry (L1 (1min)) Noise Monitoring Results – 29 August 2018 (Night)					
Location	Time	dB(A), L ₁ (1minute)	Wind speed/ direction	L _{A1} source	Identified Quarry Sources (L ₁ (1 min))
A	5:39 am	58	0.7 / 230	Birds	n/a
B	4:34 am	64	0.5 / 219	Traffic	n/a
D	4:30 am	66	0.5 / 219	Birds	n/a
E	5:33 am	58	0.7 / 230	Birds	n/a
H	5:04 am	61	0.4 / 123	Birds	n/a

Table 16 Teralba Quarry (L1 (1min)) Noise Monitoring Results – 30 August 2018 (Night)					
Location	Time	dB(A), L ₁ (1minute)	Wind speed/ direction	L _{A1} source	Identified Quarry Sources (L ₁ (1 min))
A	5:40 am	55	0.8 / 298	Traffic	n/a
B	4:33 am	66	0.5 / 263	Traffic	n/a
D	4:31 am	58	0.5 / 263	Birds	n/a
E	5:36 am	54	1.1 / 298	Birds	n/a
H	5:01 am	58	0.8 / 298	Birds	n/a

As shown in Tables 14 to 16, during the night time measurement circuits the L₁ (1 min) noise from TQ did not exceed 45 dB(A) at any monitoring location.

In summary the results of the noise monitoring programme have shown that the Teralba Quarry continues to operate within approved noise limits. No actions are recommended with respect to noise management at Teralba Quarry.

We trust this report fulfils your requirements at this time, however, should you require additional information or assistance please contact the undersigned on 4954 2276.

Yours faithfully,

SPECTRUM ACOUSTICS PTY LIMITED

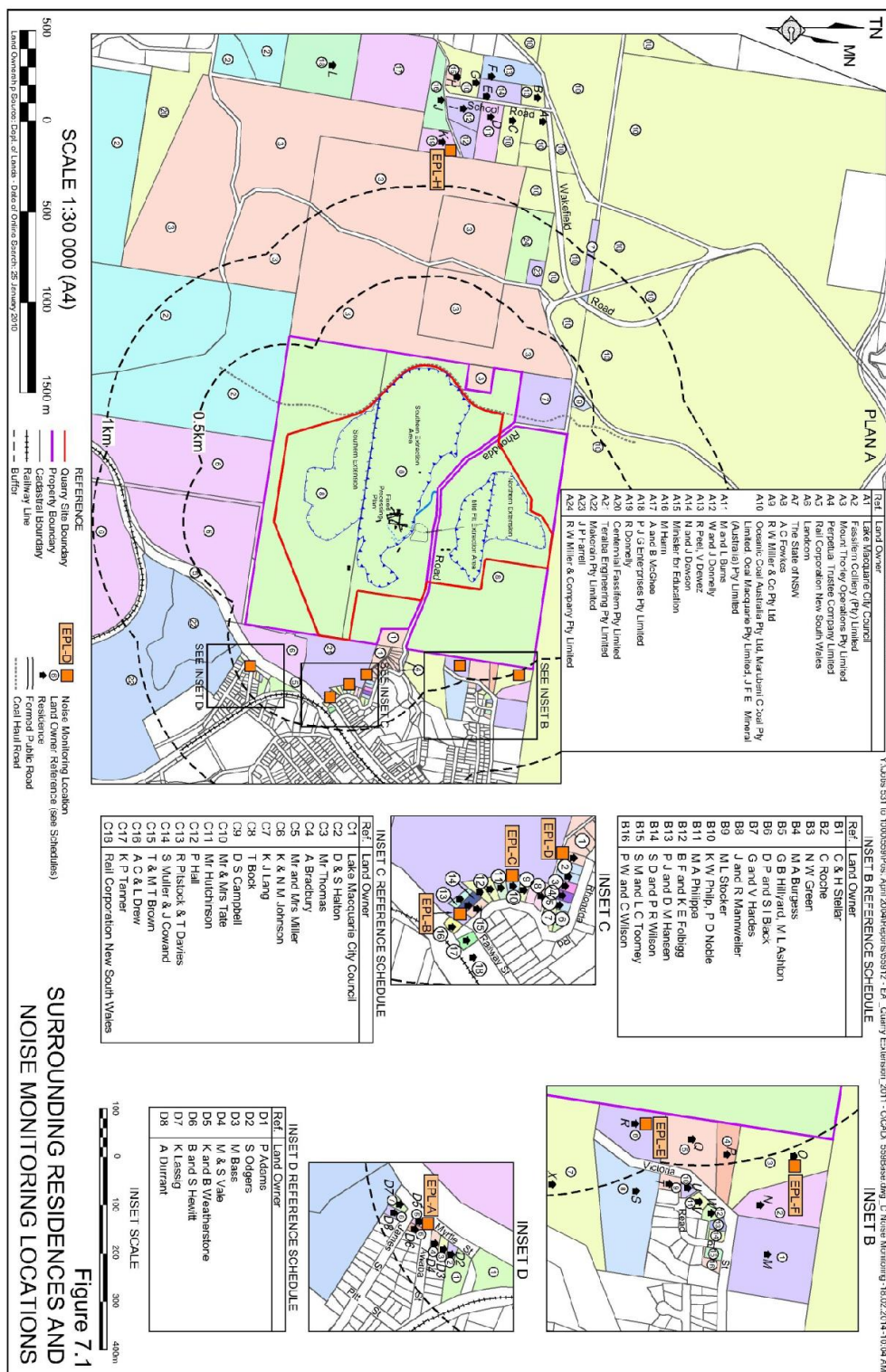
Author:

Neil Pennington MAIP, MAAS
Acoustical Consultant

Review:

Ross Hodge MAAS
Acoustical Consultant







Location EPL – B Modified noise monitoring location



26 December 2018

Ref: 8413/8185

Metromix Pty Ltd
150 Rhondda Road
Teralba NSW 2284

NOVEMBER 2018 NOISE MONITORING RESULTS – TERALBA QUARRY

This letter report presents the results of attended noise monitoring conducted for the Metromix operated Teralba Quarry (TQ) commencing on Tuesday 20th and finishing on Thursday 23rd of November, 2018. Noise monitoring was carried out in accordance with the conditions of the TQ Noise Management Plan (NMP) as shown in extract on page 2 (referenced from EPL 536).

Although the project approval nominates noise criteria at nine locations, Metromix recognises that meaningful monitoring data will continue to be collected from the closest locations to the active operational areas. As a result of this, and as outlined within the approved NMP, for periods when operations are confined to areas south of Rhondda Road, noise monitoring will be undertaken at Locations EPL-A, B, D, E and H.

Further to this, location EPL-C and EPL-F have been omitted from the noise monitoring programme given they are not required as other monitoring locations are nearby and closer to quarry related noise sources. This has been recognised by the EPA by the removal of these locations from the monitoring locations detailed in EPL 536. **Table 1** lists the address and coordinates of each noise monitoring location, with the relevant monitoring locations that were monitored during the November 2018 period highlighted in **bold**. The locations are shown on the figure in **Appendix I**.

Table 1 Noise Monitoring Locations (from PA 10-0183)			
Location in EPL	Address	Easting	Northing
EPL-A	Awaba Street, Teralba	369080	3651470
EPL-B ¹	Rhondda Road, Teralba	369250	6351915
EPL-C	Rhondda Road, Teralba ²	369205	6352015
EPL-D	Rhondda Road, Teralba	369150	6352135
EPL-E	Victoria Avenue, Teralba	369060	6352620
EPL-F	Victoria Avenue, Teralba ²	369130	6352945
EPL-H	School Road, Wakefield	366210	6352520

1. See text in relation to changes to monitoring location
2. Metromix has obtained permission for this monitoring location to be omitted.



Teralba Quarry Noise Monitoring – November 2018

It is noted that during the period when monitoring is undertaken at Location B, Metromix is required to provide a spotter to record the number of trucks departing from the Quarry and not the Teralba Business Park. Spectrum Acoustics personnel undertook identification of quarry trucks as part of the noise monitoring procedure.

As part of pre monitoring protocols Spectrum Acoustics notified, by letterbox drop, all landowners in the close vicinity of each site of the impending monitoring. The resident at Location B has previously told Metromix that he doesn't want monitoring to be done near his residence so monitoring was undertaken at a point approximately 30m south (as shown in Appendix I).

The following presents noise related conditions of EPL 536 relevant to the compliance noise monitoring programme.

Condition	Requirement																																			
L5.2	<div>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.</div> <table><thead><tr><th>Location</th><th>Day Shoulder 6:00am - 7:00am</th><th>Day 7:00am - 6:00pm</th><th>Evening 6:00pm – 10:00pm</th><th>Night 10:00pm – 6:00am</th></tr></thead><tbody><tr><td></td><td>L_{Aeq} (15 minute)</td><td>L_{Aeq} (15 minute)</td><td>L_{Aeq} (15 minute)</td><td>L_{Aeq} (15 minute)</td></tr><tr><td>EPL-A</td><td>38</td><td>38</td><td>37</td><td>L_{A1}(1min) 35 45</td></tr><tr><td>EPL-B</td><td>42</td><td>46</td><td>36</td><td>35 45</td></tr><tr><td>EPL-C</td><td>42</td><td>42</td><td>35</td><td>35 45</td></tr><tr><td>EPL-D, EPL-E, EPL-H</td><td>35</td><td>35</td><td>35</td><td>35 45</td></tr><tr><td>EPL-F</td><td>37</td><td>38</td><td>38</td><td>35 45</td></tr></tbody></table> <div>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.</div>	Location	Day Shoulder 6:00am - 7:00am	Day 7:00am - 6:00pm	Evening 6:00pm – 10:00pm	Night 10:00pm – 6:00am		L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	EPL-A	38	38	37	L _{A1} (1min) 35 45	EPL-B	42	46	36	35 45	EPL-C	42	42	35	35 45	EPL-D, EPL-E, EPL-H	35	35	35	35 45	EPL-F	37	38	38	35 45
Location	Day Shoulder 6:00am - 7:00am	Day 7:00am - 6:00pm	Evening 6:00pm – 10:00pm	Night 10:00pm – 6:00am																																
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)																																
EPL-A	38	38	37	L _{A1} (1min) 35 45																																
EPL-B	42	46	36	35 45																																
EPL-C	42	42	35	35 45																																
EPL-D, EPL-E, EPL-H	35	35	35	35 45																																
EPL-F	37	38	38	35 45																																
L5.3	<div>For the purposes of Condition L5.2:</div> <div><div>a) Day-Shoulder is defined as the period between 6am to 7am Monday to Saturday.</div><div>b) Day is defined as:<div><div>a. the period from 7am to 6pm Monday to Saturday; and</div><div>b. the period from 8am to 6pm Sundays and Public Holidays.</div></div></div><div>c) Evening is defined as the period from 6pm to 10pm.</div><div>d) Night is defined as:<div><div>a. the period from 10pm to 7am Monday to Saturday; and</div><div>b. the period from 10pm to 8am Sundays and Public Holidays.</div></div></div></div>																																			
L5.4	<div>The contributed noise level from the premises must not exceed the noise limits specified within EPL 536 at the most noise-affected point on or within the boundary of any residential premises to the north and/or south of the premises, except as expressly provided by this licence, or by the EPA in writing.</div>																																			
L5.5	<div>The noise limits set out in conditions L5.2 apply under all meteorological conditions except for anyone of the following:</div> <div><div>a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or</div><div>b) Stability category F temperature inversion conditions and wind speeds greater the 2 metres/second at 10 metres above ground level; or</div><div>c) Stability category G temperature inversion conditions.</div></div>																																			
L5.6	<div>For the purpose of condition L5.5:</div>																																			





Teralba Quarry Noise Monitoring – November 2018

	<div><div>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.</div><div>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 <i>NSW industrial Noise Policy (EPA 2000)</i></div></div> <div>Note: The weather station must be designed, commissioned and operated in a manner to obtain the necessary parameters required under the above condition.</div>																
L5.7	<div>To determine compliance:</div> <div><div>1. With the $L_{Aeq}(15\text{ min})$ noise limits in condition L5.2, the licensee must locate noise monitoring equipment;</div><div><div>a) approximately on the boundary, where any dwelling is situated 30 metres or less from the property boundary that is closest to the premises; or,</div><div>b) 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; or where applicable</div><div>c) within approximately 50 metres if the boundary of a national park or nature reserve.</div></div><div>2. With the $LA1(1\text{ minute})$ noise limits in condition L5.2, the noise monitoring equipment must be located within 1 metre of a dwelling facade.</div><div>3. With the noise limits in condition L5.2, the noise monitoring equipment must be located;</div><div><div>a) at the most affected point at a location where there is no dwelling at the location, or</div><div>b) at the most affected point within an area at a location prescribed by conditions L5.7 1(a) or L5.7 1(b).</div></div></div>																
L5.8	<div>A non-compliance will still occur where noise generated from the premises in excess of the appropriate noise limit is measured:</div> <div><div>a) at a location other than an area prescribed by the conditions of this licence, and /or</div><div>b) at a point other than the most affected point at a location.</div></div>																
L5.9	<div>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.</div>																
L5.10	<div>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.</div>																
L7.1	<div>The licensee must comply with the operating hours specified in Column 2, Column 3, and Column 4 of the table below:</div> <table><tr><th>Day</th><th>Loading and Dispatch of Quarry Trucks</th><th>Extraction and Processing</th><th>Receipt of Concrete</th></tr><tr><td>Monday - Friday</td><td>4:00am Monday to midnight Friday</td><td>7:00am to 7:00pm</td><td>7:00am to 5:00pm</td></tr><tr><td>Saturday</td><td>Midnight Friday to 6:00pm Saturday</td><td>7:00am to 2:00pm</td><td>7:00am to 2:00pm</td></tr><tr><td>Sundays and Public Holidays</td><td>None</td><td>none</td><td>none</td></tr></table> <div><div>Note: Maintenance activities may occur at any time provided they are inaudible at privately-owned residence.</div><div>*VENM = Virgin Excavated Natural Material</div><div>**ENM = Excavated Natural Material</div></div>	Day	Loading and Dispatch of Quarry Trucks	Extraction and Processing	Receipt of Concrete	Monday - Friday	4:00am Monday to midnight Friday	7:00am to 7:00pm	7:00am to 5:00pm	Saturday	Midnight Friday to 6:00pm Saturday	7:00am to 2:00pm	7:00am to 2:00pm	Sundays and Public Holidays	None	none	none
Day	Loading and Dispatch of Quarry Trucks	Extraction and Processing	Receipt of Concrete														
Monday - Friday	4:00am Monday to midnight Friday	7:00am to 7:00pm	7:00am to 5:00pm														
Saturday	Midnight Friday to 6:00pm Saturday	7:00am to 2:00pm	7:00am to 2:00pm														
Sundays and Public Holidays	None	none	none														





NOISE MEASUREMENTS

Attended noise monitoring was conducted with Brüel & Kjær Type 2250 Precision Sound Analysers. These instruments have Type 1 characteristics as defined in AS1259-1982 "Sound Level Meters" and have current NATA calibration. Field calibration of each instrument was carried out at the start and end of each monitoring period.

The noise monitoring was conducted in general accordance with the requirements of Section 9 of the NMP (Noise Monitoring Protocol and Evaluation of Compliance) as follows;

"Metromix proposes to adopt a noise monitoring protocol that provides feedback on the effectiveness of the noise control measures and demonstrate compliance with the conditions within the Project Approval 10_0183 and Environment Protection Licence 0536.

The approach to monitoring compliance is based substantially upon Metromix's experience to date which has identified the on-site activities have not been the source of noise complaints or any recorded non-compliance. Hence, it is considered the monitoring program needs to reflect this fact."

A-weighted noise levels were measured over 15 minute monitoring periods with data acquired at 1 second statistical intervals and the meter set to "fast" response. Each 1 second measurement is accompanied by a third-octave band spectrum from 20 - 20k Hz which is required for analysing INP 'modifying factors'. Time based field notes allow for determination of the relative contributions to the overall noise level of all significant noise sources.

The worst case 15 minute Leq noise level for each monitoring period is shown in the tables below. Where the noise from TQ was audible, Brüel & Kjær "Evaluator" analysis software was used to quantify the contributions of the quarry and other significant noise sources to the overall level. Quarry noise from TQ is shown in the tables in bold type. Where noise from TQ is listed as faintly audible, this means the noise levels from the quarry were at least 10 dB below the ambient level during the measurement and not measurable.

Noise levels were recorded for each of the L10, Leq, Lmax, L1, L90 and Lmin percentiles. All noise levels shown in the tables of results are in dB(A) Leq (15 min). Levels for the other percentiles are not shown as they have no compliance criteria for comparison but are available on request.

Meteorological data used in this report was obtained from the quarry-operated weather station at the site. Wind speed is presented in metres per second units. Wind speeds less than 0.5 m/s are noted as "calm".

Noise Compliance Assessment

The results of the noise measurements undertaken throughout the various time periods are provided in **Tables 2 to 16**. EPL 536 refers to the various time periods as follows:

- a) Day-Shoulder is defined as the period between 6am to 7am Monday to Saturday.
- b) Day is defined as:





Teralba Quarry Noise Monitoring – November 2018

- (i) the period from 7am to 6pm Monday to Saturday; and
 - (ii) the period from 8am to 6pm Sundays and Public Holidays.
- c) Evening is defined as the period from 6pm to 10pm.
- d) Night is defined as:
- (i) the period from 10pm to 7am Monday to Saturday; and
 - (ii) the period from 10pm to 8am Sundays and Public Holidays.

Table 2 Teralba Quarry Noise Monitoring Results – 20 November 2018 Night					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	5:36 am	46	35	Calm	Traffic (43), birds (42), TQ inaudible
B	4:31 am	49	35	Calm	Birds (47), traffic (43), TQ inaudible
D	4:30 am	47	35	Calm	Birds (43), Traffic (43), TQ inaudible
E	5:31 am	51	35	Calm	Birds (51), traffic (41), TQ inaudible
H	5:02 am	48	35	Calm	Birds (48), Traffic (36), TQ inaudible

Table 3 Teralba Quarry Noise Monitoring Results – 20 November 2018 Day Shoulder					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	6:37 am	46	38	0.7 / 287	Birds (44), traffic (39), TQ inaudible
B	6:22 am	52	42	Calm	Industrial noise (50), traffic (46), TQ (32) ¹
D	6:44 am	50	35	0.7 / 287	Traffic (48), birds (43), TQ inaudible
E	6:32 am	52	35	Calm	Birds (50), traffic (45), TQ inaudible
H	6:02 am	51	35	Calm	Birds (50), Traffic (41), TQ inaudible

Note: 1 See text description and analysis

Table 4 Teralba Quarry Noise Monitoring Results – 20 November 2018 Day					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	7:04 am	47	38	Calm	Traffic (42), industry (42), trains (40), TQ inaudible
B	4:32 pm	60	46	1.7 / 65	Trucks (60), industry (40), wind (40), TQ inaudible
D	4:29 pm	52	35	1.7 / 65	Traffic (52), birds (41), TQ inaudible
E	7:46 am	51	35	Calm	Dogs (50), traffic (42), TQ inaudible
H	8:37 am	52	35	1.0 / 19	Birds (51), Traffic (42), TQ inaudible

Note: 1 See text description and analysis





Teralba Quarry Noise Monitoring – November 2018

Table 5 Teralba Quarry Noise Monitoring Results – 20 November 2018 Evening					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	6:30 pm	49	37	1.8 / 52	Dogs (47), trains (41), TQ inaudible
B	6:01 pm	59	36	1.7 / 63	Traffic (59), trains (44), industry (40), TQ inaudible
D	6:02 pm	48	35	1.7 / 63	Traffic (48), birds (34), TQ inaudible
E	7:00 pm	51	35	1.5 / 56	Traffic (49), birds (44), TQ inaudible
H	7:43 pm	52	35	1.2 / 63	Birds (48), mowing (47), insects (41), TQ inaudible

Table 6 Teralba Quarry Noise Monitoring Results – 21 November 2018 Night					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	5:36 am	50	35	1.0 / 339	Trains (46), birds (46), traffic (40), TQ inaudible
B	4:32 am	49	35	1.0 / 358	Train (47), traffic (42), insects (34), TQ inaudible
D	4:30 am	41	35	1.0 / 358	Birds (38), traffic (37), TQ inaudible
E	5:30 am	45	35	1.0 / 339	Birds (43), traffic (37), TQ inaudible
H	5:02 am	50	35	2.0 / 357	Birds (45), dogs (44), traffic (42), TQ inaudible

Table 7 Teralba Quarry Noise Monitoring Results – 21 November 2018 Day Shoulder					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	6:32 am	52	38	2.8 / 4	Birds (50), traffic (45), TQ inaudible
B	6:23 am	50	42	2.8 / 4	Industrial noise (47), Traffic (47), TQ (33)¹
D	6:44 am	45	35	2.4 / 14	Traffic (43), birds (38), TQ inaudible
E	6:45 am	55	35	2.4 / 14	Motorbike (53), birds (48), traffic (41), TQ inaudible
H	6:03 am	51	35	1.7 / 16	Birds (50), traffic (41), TQ inaudible
Note: 1 See text description and analysis					





Teralba Quarry Noise Monitoring – November 2018

Table 8 Teralba Quarry Noise Monitoring Results – 21 November 2018 Day					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	3:54 pm	48	38	2.5 / 345	Wind (46), industrial noise (42), traffic (34), TQ inaudible
B	9:36 am	54	46	2.2 / 349	Traffic (52), trains (48), TQ (28) ¹
D	8:03 am	55	35	2.2 / 13	Traffic (52), birds (50), TQ (<30)
E	7:44 am	55	35	1.9 / 355	Birds (55), traffic (42), TQ inaudible
H	9:41 am	51	35	2.2 / 349	Wind (48), birds (47), TQ inaudible
Note: 1 See text description and analysis					

Table 9 Teralba Quarry Noise Monitoring Results – 21 November 2018 Evening					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	8:28 pm	54	37	2.0 / 332	Insects (53), train (43), TQ barely audible
B	6:01 pm	55	36	2.9 / 350	Traffic (54), traffic, (43), train (41), TQ inaudible
D	7:20 pm	49	35	2.8 / 351	Car (47), traffic (42), TQ inaudible
E	7:50 pm	49	35	2.2 / 349	Crickets (48), traffic (40), TQ inaudible
H	6:12 pm	59	35	2.9 / 350	Birds (54), wind (53), car (52), TQ inaudible

Table 10 Teralba Quarry Noise Monitoring Results – 22 November 2018 Night					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	5:37 am	44	35	2.0 / 341	Birds (42), traffic (38), TQ inaudible
B	4:34 am	58	35	1.9 / 40	Trains (54), motorcycle (52), traffic (50), TQ inaudible
D	4:30 am	45	35	1.9 / 40	Traffic (45), TQ inaudible
E	5:32 am	49	35	2.0 / 341	Wind (47), traffic (42), TQ inaudible
H	5:01 am	45	35	1.1 / 19	Birds (42), traffic (38), wind (35), TQ inaudible





Teralba Quarry Noise Monitoring – November 2018

Table 11 Teralba Quarry Noise Monitoring Results – 22 November 2018 Day Shoulder					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	6:31 am	46	38	1.8 / 329	Traffic (42), birds (41), wind (37), TQ inaudible
B	6:23 am	48	42	1.8 / 329	Train (44), industrial noise (42), traffic (42), TQ inaudible
D	6:41 am	46	35	1.9 / 337	Traffic (43), wind (42), TQ inaudible
E	6:33 am	52	35	1.8 / 329	Cars (50), birds (44), wind (40), TQ inaudible
H	6:02 am	49	35	2.6 / 330	Birds (47), traffic (43), TQ inaudible

Table 12 Teralba Quarry Noise Monitoring Results – 22 November 2018 Day					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	7:05 am	49	38	2.5 / 321	Dog (46), traffic (42), wind (41), trains (40), TQ inaudible
B	4:32 pm	57	36	3.1 / 258	Birds (55), traffic (48), wind (46), TQ inaudible
D	7:40 am	53	35	3.3 / 344	Traffic (52), birds (43), TQ inaudible
E	8:02 am	59	35	2.7 / 3232	Insects (57), traffic (48), wind (46), TQ inaudible
H	9:45 am	56	35	3.7 / 319	Birds (55), wind (45), TQ inaudible
Note: 1 See text description and analysis					

Table 13 Teralba Quarry Noise Monitoring Results – 22 November 2018 Evening					
Location	Start Time	Total noise dB(A) Leq	Criterion dB(A) Leq	Wind speed/ direction	Identified Noise Sources (Leq (15 min))
A	6:00 pm	44	37	2.6 / 264	Wind (41), traffic (39), TQ inaudible
B	6:01 pm	55	36	2.6 / 264	Traffic (51), wind (50), train (45), TQ inaudible
D	7:05 pm	54	35	2.1 / 272	Wind (52), traffic (48), TQ inaudible
E	6:36 pm	55	35	2.6 / 261	Traffic (54), domestic (42), TQ inaudible
H	7:41 pm	49	35	1.8 / 271	Birds (46), wind (45), TQ inaudible

The results shown in Tables 2 to 13 show that, under the operational and atmospheric conditions at the time of monitoring, noise emissions from TQ did not exceed the relevant criterion at any monitoring location during any part of the survey.

Monitoring location EPL-B is situated close to the corner of Rhondda Road and Railway Street. This monitoring location is included predominantly to measure quarry noise from emissions from trucks exiting the site along the private section of the access road (through the Teralba Business Park). From the monitoring location it was possible to determine which trucks were associated with the quarry and a dedicated spotter was not required during this monitoring period.





Teralba Quarry Noise Monitoring – November 2018

When measuring noise at the EPL-B location, the noise emissions from the exiting quarry trucks (whilst on the private section of the access road) was measured and the worst case 15 minute Leq noise level calculated based on the time each truck was on the private road. The worst case calculated Leq level for the trucks is that shown for Location B in Tables 2 to 13.

At location EPL-D the acoustic environment is significantly influenced by noise from traffic on Rhondda Rd, trains and other industries within the vicinity. Noise emissions from the batching plant which is located adjacent to TQ contributed to the received noise during some monitoring periods.

Data from those times where TQ operations were audible were analysed using the “Evaluator” software. This analysis showed the noise did not contain any tonal, impulsive or low frequency components as per definitions of “modifying factor corrections” in the NSW Industrial Noise Policy.

In addition to the operational noise, the noise from TQ must not exceed **45 dB(A) L1 (1 min)** within the night-time period i.e. between the hours of 10 pm and 7 am, in accordance with *Condition L4.1* of EPL 536. This is to minimise the potential for sleep disturbance as a result of individual loud noises from the quarry. The compliance measurement locations are different for each of the operational and sleep disturbance noise. That is, the sleep disturbance criterion is typically applicable at 1m from the façade of a bedroom window.

To avoid undue disturbance to residents, the L1 (1 min) noise level from the operational measurements are used to show general compliance with the sleep disturbance criterion. That is, as the distance between the noise source and the operational noise monitoring location is significantly greater than the distance between the operational noise monitoring location and the sleep disturbance monitoring location (i.e. 1m from the façade of the house) there will be little variation in L1 (1 min) levels between the two monitoring locations. It must be noted, however, that the sleep disturbance criterion is to be measured near a bedroom window. As the internal layout of each residence is not known, to consider a worst case, a bedroom window is assumed to be facing the operational noise monitoring location.

The results of the sleep disturbance measurements are shown in **Tables 14 to 16**.

Table 14 Teralba Quarry (L1 (1min)) Noise Monitoring Results – 20 November 2018 (Night)					
Location	Time	dB(A), L ₁ (1minute)	Wind speed/ direction	L _{A1} source	Identified Quarry Sources (L ₁ (1 min))
A	5:36 am	67	Calm	Birds	n/a
B	4:31 am	70	Calm	Traffic	n/a
D	4:30 am	68	Calm	Traffic	n/a
E	5:31 am	61	Calm	Birds	n/a
H	5:02 am	57	Calm	Birds	n/a





Teralba Quarry Noise Monitoring – November 2018

Table 15 Teralba Quarry (L1 (1min)) Noise Monitoring Results – 21 November 2018 (Night)					
Location	Time	dB(A), L ₁ (1minute)	Wind speed/ direction	L _{A1} source	Identified Quarry Sources (L ₁ (1 min))
A	5:36 am	70	1.0 / 339	Birds	n/a
B	4:32 am	72	1.0 / 358	Traffic	n/a
D	4:30 am	60	1.0 / 358	Birds	n/a
E	5:30 am	58	1.0 / 339	Birds	n/a
H	5:02 am	61	2.0 / 357	Birds	n/a

Table 16 Teralba Quarry (L1 (1min)) Noise Monitoring Results – 22 November 2018 (Night)					
Location	Time	dB(A), L ₁ (1minute)	Wind speed/ direction	L _{A1} source	Identified Quarry Sources (L ₁ (1 min))
A	5:37 am	68	2.0 / 341	Traffic	n/a
B	4:34 am	74	1.9 / 40	Traffic	n/a
D	4:30 am	58	1.9 / 40	Birds	n/a
E	5:32 am	55	2.0 / 341	Birds	n/a
H	5:01 am	64	1.1 / 19	Birds	n/a

As shown in Tables 14 to 16, during the night time measurement circuits the L1 (1 min) noise from TQ did not exceed 45 dB(A) at any monitoring location.

In summary the results of the noise monitoring programme have shown that the Teralba Quarry continues to operate within approved noise limits. No actions are recommended with respect to noise management at Teralba Quarry.

We trust this report fulfils your requirements at this time, however, should you require additional information or assistance please contact the undersigned on 4954 2276.

Yours faithfully,

SPECTRUM ACOUSTICS PTY LIMITED

Author:

Neil Pennington MAIP, MAAS, MASA
Acoustical Consultant

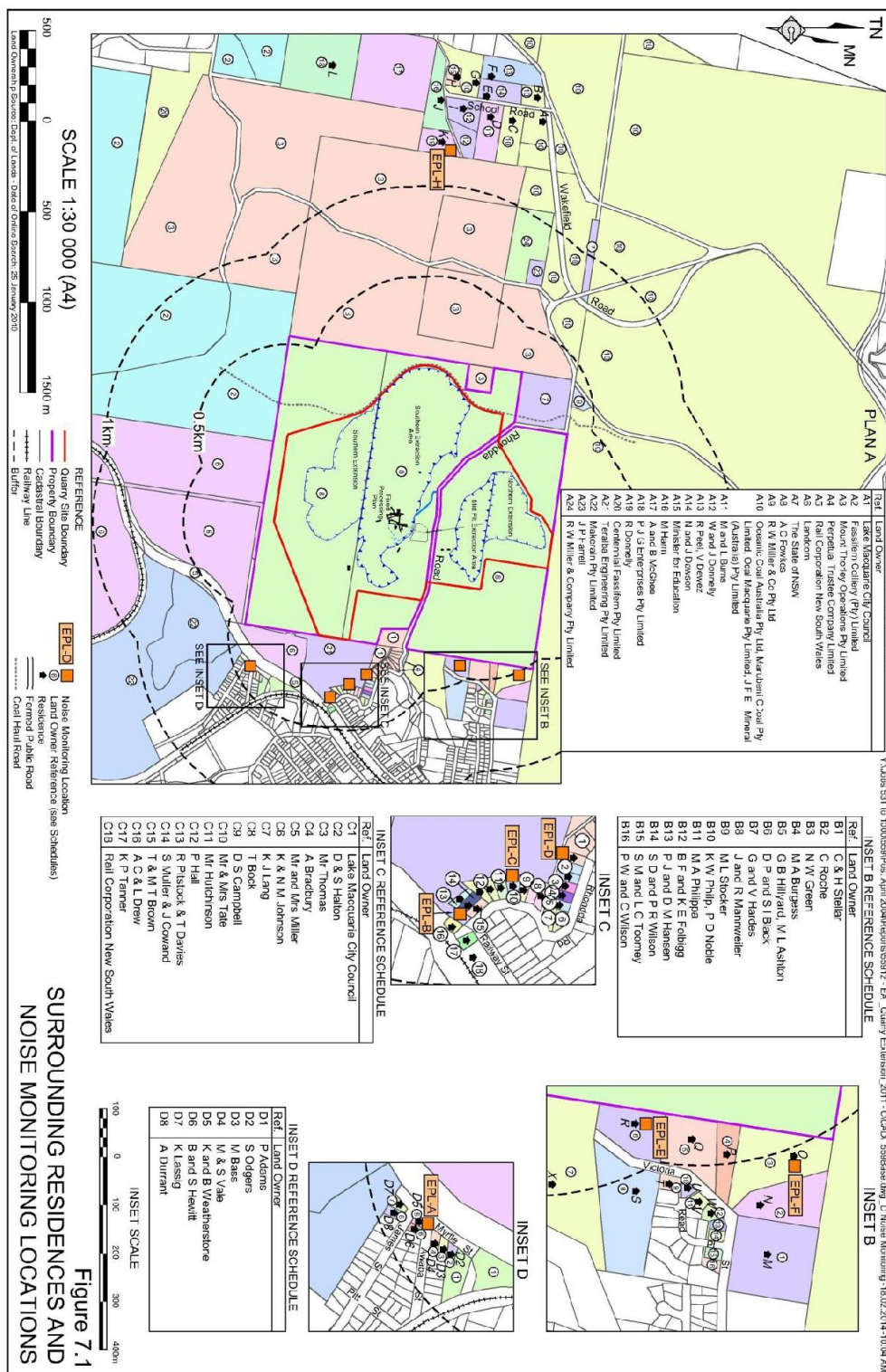
Review:

Ross Hodge MAAS
Acoustical Consultant





Teralba Quarry Noise Monitoring – November 2018





Location EPL – B Modified noise monitoring location



Appendix 3

2018 Echo Ecology and Surveying Services – Annual Nesting Box Inspection

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NEST BOX MONITORING REPORT

Teralba Quarry, Teralba, NSW

Prepared for
Metromix Pty Ltd
Teralba Quarry
Rhondda Road
Teralba NSW 2284

Job Reference 074 - October 2018

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Nest box Monitoring Report
Teralba, NSW

Document Control

Project Name	Teralba Quarry
Project Number	074
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Prepared by	Dr Anna McConville (PhD, B.Env.Sc.) Ecologist / Director
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Job Reference: 074
October 2018



Nest box Monitoring Report
Teralba, NSW

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Nest box Monitoring Report
Teralba, NSW

1.0 INTRODUCTION

Echo Ecology and Surveying has been engaged by Metromix to undertake annual nest box monitoring at their Teralba Quarry to meet consent conditions.

2.0 BACKGROUND

The fauna assessment for the Teralba Quarry Extension (Kendall & Kendall Ecological Services 2011), recommended that nest boxes be installed to mitigate the potential impacts of the quarry expansion on hollow-dependent fauna species. Subsequently the project approval requires the installation, maintenance and monitoring of nest boxes within the Teralba Quarry site.

Condition 50 of the project approval for Teralba Quarry states:

- 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.

While the project approval condition specifies nest boxes be installed for Sugar Gliders, the fauna assessment report (Kendall & Kendall Ecological Services 2011), recommended that these nest boxes be installed to enhance habitat for Squirrel Gliders, a threatened species. Squirrel Gliders haven't been recorded onsite to date, but it is known from the local area.

In 2014, 70 nest boxes were installed at Teralba Quarry (Kendall & Kendall Ecological Services 2015) and these were monitored in 2015 (Kendall & Kendall Ecological Services 2015), 2016 (Kendall & Kendall Ecological Services 2016) and 2017 (Kendall & Kendall Ecological Services 2017). Due to theft and fire damage, 18 of these nest boxes were replaced in 2017. Five additional nest boxes for each of the target species are stored at Teralba Quarry so that replacements can be quickly installed if other boxes are damaged.

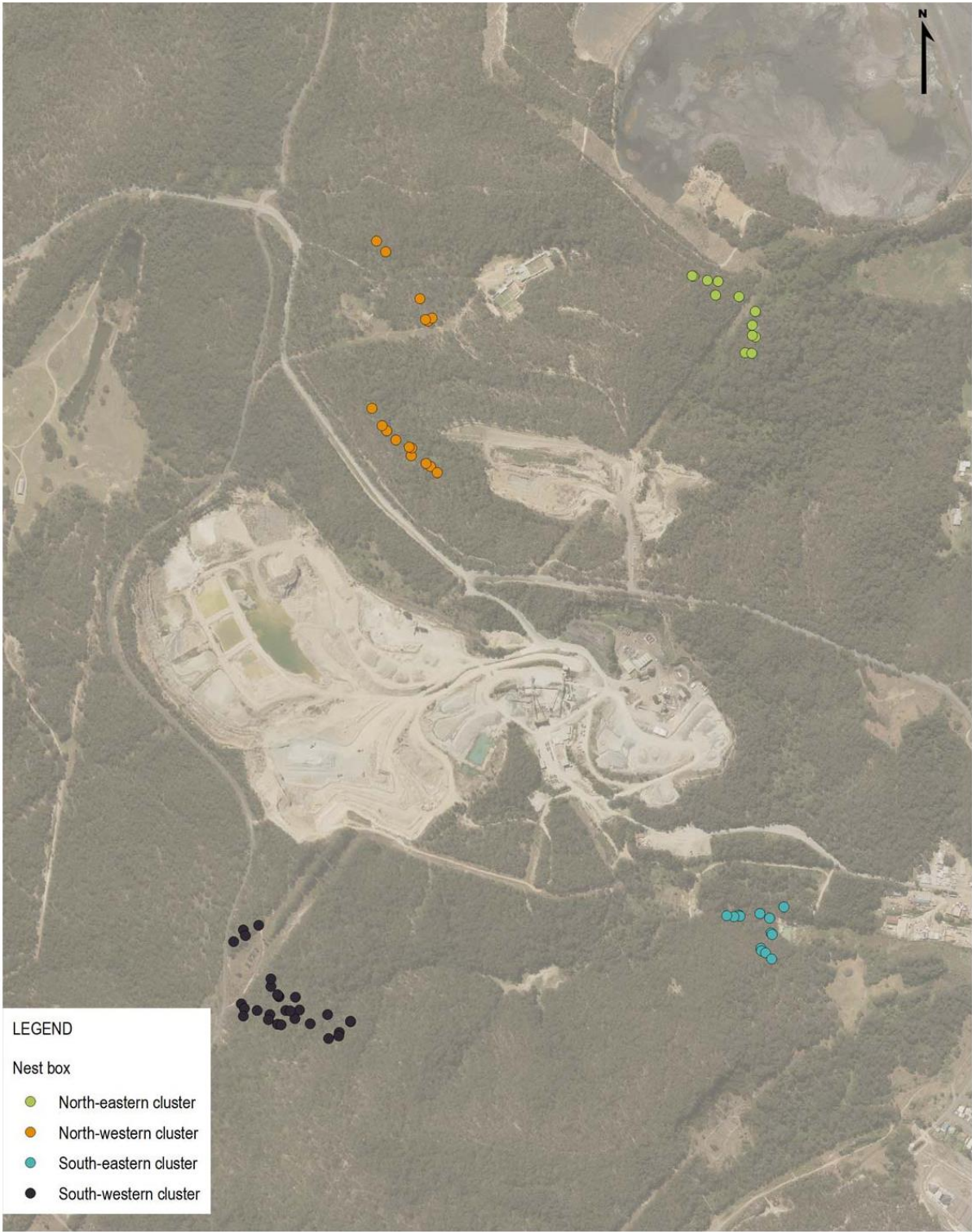
3.0 METHODS

Nest boxes were checked over two days (27-28/9/2018) using a wireless nest box inspection camera (Brite Star Electronics) mounted on an extension pole. The nest boxes were checked by Anna McConville and Keith Kendall. Where nest boxes required repairs or visual confirmation, we manually inspected them using a ladder. We recorded nest box



Nest box Monitoring Report
Teralba, NSW

location, occupation evidence and fauna species present. We also took notes of any repairs that were required. The locations of nest boxes are shown in Figure 3-1 below.



0 100 200 300 400 m

BACKGROUND SOURCE: NSW imagery © DFSI
DISCLAIMER: Indicative only. All boundaries, scale and points are approximate only

TERALBA QUARRY		
Job No: 074	Rev: A	Date: 03 Oct 2018
NEST BOX MONITORING - 2018	Figure 3-1: Nest Box Locations	

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Nest box Monitoring Report
Teralba, NSW

4.0 RESULTS

None of the target species (Squirrel Gliders, Little Lorikeets or microbats) were observed using nest boxes during the inspection. Feral bees were also not recorded using nest boxes.

Sugar Gliders (*Petaurus breviceps*) were recorded occupying seven of the nest boxes, four of which have been occupied during previous years. A further 17 boxes were found to have leaves with depressions like those created by gliders, indicating that the Sugar Gliders are using many of the nest boxes for sheltering. Another 23 boxes had leaves present (but no defined nest) indicating that animals had visited the boxes. Ants were found in two of the boxes.

Only 18 of the nest boxes showed no sign of occupation, with 83 % of these being microbat boxes. Evidence of use is difficult to determine in microbat nest boxes unless the animals are present as the bottom opening hole means that guano falls through.

Nest box occupancy by Sugar Gliders has been steadily increasing since installation (Figure 4-1). With occupancy relatively steady in the north-east of the study area, and less reliable in other areas (Figure 4-2).

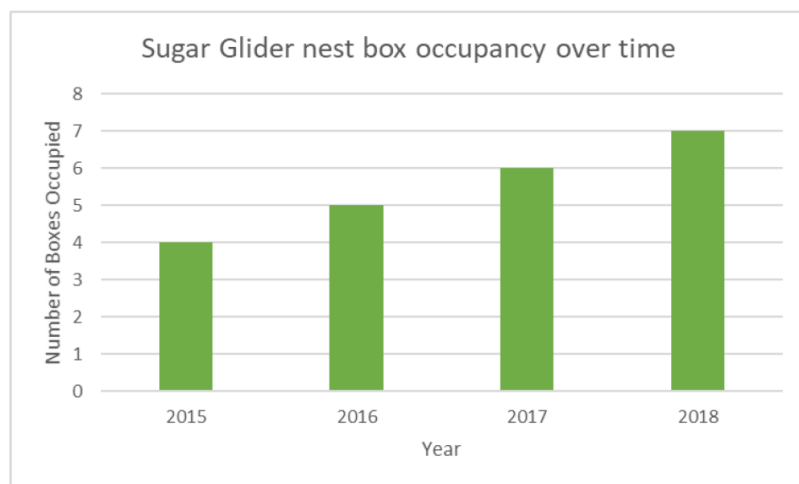


Figure 4-1: Sugar Glider nest box occupancy



Nest box Monitoring Report
Teralba, NSW

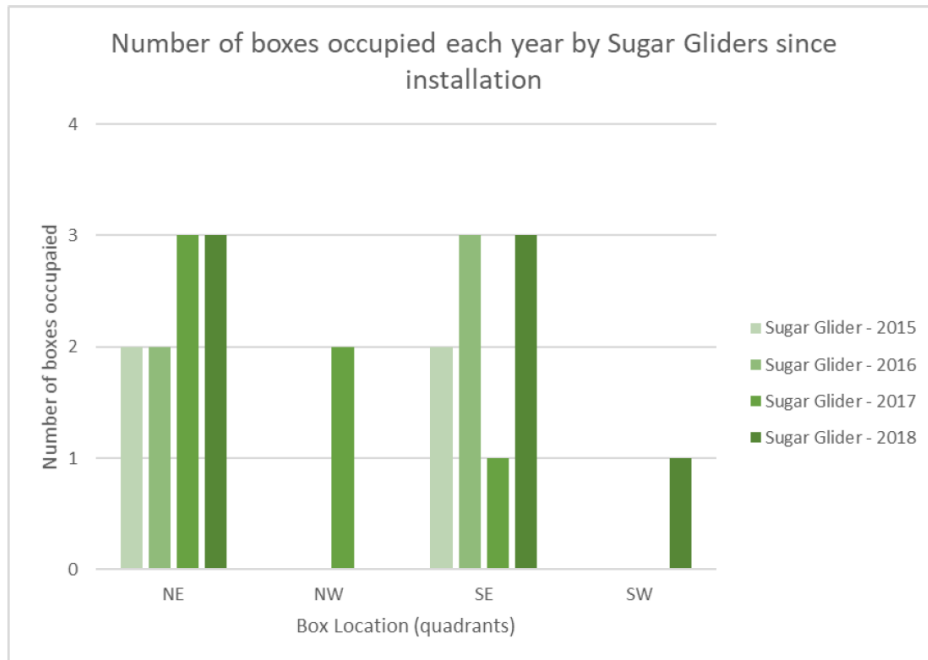


Figure 4-2: Nest box occupancy by Sugar Gliders since installation by nest box location. Excludes the 18 recently replaced boxes

Appendix A contains the nest box inspection results for 2018 and previous years.

5.0 RECOMMENDATIONS

Two microbat nest boxes (51 and 54) require new shade cloth to be attached. We recommend that this be undertaken during the 2019 monitoring event.

The Project Approval conditions state that nest boxes are to be relocated or replaced if not used by the target species within 12 months. None of the nest boxes have been used by the target species. However, for Squirrel Glider and Little Lorikeet boxes, the requirement to relocate or replace nest boxes if not used within 12 months is not very appropriate. The boxes are being used by native fauna species (e.g. Sugar Gliders) and removal or replacement would impact these non-target species. Microbat nest boxes are not typically very successful for threatened microbats and have varying success rates. For example, bats have been found not to begin occupying nest boxes until they have been installed for some time (e.g. 10 years at Mt Owen).



Nest box Monitoring Report
Teralba, NSW

Therefore, we recommend that the Project Approval conditions are reviewed and revised to:

- Conduct ongoing regular monitoring and maintenance
- At 10 years post installation, undertake a review of the effectiveness of the nest boxes for the target species and if necessary, consider installing boxes of a different design or boxes in a different location to improve success rates.

6.0 REFERENCES

- Kendall & Kendall Ecological Services. 2011. Teralba Quarry Extensions Fauna Assessment. Prepared for R.W. Corkery & Co on behalf of Metromix Pty Ltd.
- Kendall & Kendall Ecological Services. 2015. Teralba Quarry Extension Project Approval 50 - Nesting box Installation and First Annual Inspection. Prepared for Metromix Pty Ltd.
- Kendall & Kendall Ecological Services. 2016. Teralba Quarry Extension Project Approval 50 - Annual Nesting Box Inspection. Prepared for Metromix Pty Ltd.
- Kendall & Kendall Ecological Services. 2017. Teralba Quarry Extension Project Approval 50 - Annual Nesting Box Inspection. Prepared for Metromix Pty Ltd.



Nest box Monitoring Report
Teralba, NSW

APPENDIX A NEST BOX MONITORING RESULTS

Table A: Nest box monitoring results

Tag No	Cluster	Box Type	Tree Species	Easting (GDA Zone56)	Northing (GDA zone 56)	2015 Results	2016 Results	2017 Results	2018 Results	2018 Repair Notes
1	NW	Little Lorikeet	Spotted Gum	367958	6353147	-	Leaves with depression	Ants	Ants	
2	NW	Little Lorikeet	Stringybark	367940	6353168	-	Leaves with depression	Leaves	Leaves with depression	
3	NW	Little Lorikeet	Spotted Gum	368025	6353055	Leaves	Leaves with depression	2 Sugar Gliders	Leaves with depression	
4	NW	Little Lorikeet	Spotted Gum	368041	6353011	-	Leaves	Leaf nest	Leaves with depression	
5	NW	Little Lorikeet	Spotted Gum	368049	6353017	Leaves	Leaves	Leaves and ants	Old leaf Leaves with depression and ants	
6	NW	Little Lorikeet	Spotted Gum	368036	6353014	Leaves	Leaves	1 Sugar Glider	Leaves with depression	
7	SW	Squirrel Glider	Stringybark	367675	6351673	-	Old bits of bark	Bird egg shell	Leaves	
8	SW	Microbat	Bloodwood	367681	6351664	-	-	-	-	
9	SW	Squirrel Glider	Stringybark	367679	6351649	-	Old bits of bark	-	Leaves and bark	
10	SW	Squirrel Glider	Stringybark	367731	6351652	-	-	Leaves	Leaves with depression	
11	SW	Microbat	Bloodwood	367728	6351642	-	-	-	-	
12	SW	Squirrel Glider	Bloodwood	367746	6351633	-	-	Leaf nest	Sugar Gliders 2+	
13	SW	Microbat	Stringybark	367753	6351632	-	-	-	Mud Wasps	
14	SW	Squirrel Glider	Stringybark	367762	6351660	-	Old bits of bark	-	Leaves with depression	
15	SW	Microbat	Bloodwood	367749	6351687	-	-	-	-	
16	SW	Squirrel Glider	Bloodwood	367733	6351707	-	-	-	-	
17	SW	Little Lorikeet	Bloodwood	367733	6351722	Box Missing	Box Missing	New Box Installed	Leaves with depression	
18	SW	Little Lorikeet	Bloodwood	367747	6351689	Box Missing	Box Missing	New Box Installed	Leaves	
19	SW	Little Lorikeet	Bloodwood	367781	6351686	Box Missing	Box Missing	New Box Installed	Leaves	
20	SW	Little Lorikeet	Stringybark	367789	6351661	Box Missing	Box Missing	New Box Installed	Leaves	

Nest box Monitoring Report
Teralba, NSW



Tag No	Cluster	Box Type	Tree Species	Easting (GDA Zone56)	Northing (GDA zone 56)	2015 Results	2016 Results	2017 Results	2018 Results	2018 Repair Notes
21	SW	Little Lorikeet	Stringybark	367810	6351634	Box Missing	Box Missing	New Box Installed	Leaves	
22	SW	Little Lorikeet	Stringybark	367844	6351632	Box Missing	Box Missing	New Box Installed	Leaves	
23	SW	Little Lorikeet	Stringybark	367889	6351638	Box Missing	Box Missing	New Box Installed	Leaves	
24	SW	Little Lorikeet	Stringybark	367889	6351639	Box Missing	Box Missing	New Box Installed	Leaves	
25	SW	Little Lorikeet	Stringybark	367887	6351617	Box Missing	Box Missing	New Box Installed	Leaves	
26	SW	Little Lorikeet	Stringybark	367886	6351610	Box Missing	Box Missing	New Box Installed	Leaves	
27	SW	Little Lorikeet	Stringybark	367846	6351605	Box Missing	Box Missing	New Box Installed	Leaves	
28	SW	Little Lorikeet	Bloodwood	367780	6351644	Box Missing	Box Missing	New Box Installed	Leaves	
29	SW	Little Lorikeet	Bloodwood	367771	6351659	Box Missing	Box Missing	New Box Installed	Leaves	
30	SW	Little Lorikeet	Bloodwood	367746	6351691	Box Missing	Box Missing	New Box Installed	Leaves	
31	SW	Squirrel Glider	Spotted Gum	367709	6351827	Box Missing	Box Missing	New Box Installed	Leaves	
32	SW	Squirrel Glider	Spotted Gum	367679	6351818	Box Missing	Box Missing	New Box Installed	Leaves	
33	SW	Squirrel Glider	Spotted Gum	367683	6351807	Box Missing	Box Missing	New Box Installed	Leaves	
34	SW	Squirrel Glider	Spotted Gum	367660	6351795	Box Missing	Box Missing	New Box Installed	Leaves	
35	SE	Squirrel Glider	Grey gum	368738	6351863	-	Old leaves	-	Sugar glider 3+	
36	SE	Microbat	Stringybark	368710	6351841	Leaves	No leaves	-	-	
37	SE	Squirrel Glider	Grey gum	368691	6351850	Leaves	Leaves	-	Old Leaves with depression. Chew marks on hole	
38	SE	Microbat	Stringybark	368650	6351847	Leaves	Brown Antechinus and Leaves	Leaves	Leaves taking up the entire bat box. Opened the top and there were scats on top.	
39	SE	Squirrel Glider	Tallowwood	368652	6351845	2 Sugar Gliders	Sugar Glider	-	Sugar gliders 2+	
40	SE	Microbat	Tallowwood	368640	6351844	-	-	-	-	
41	SE	Squirrel Glider	Tallowwood	368626	6351846	Leaves	Leaves	-	Chew marks on hole. Leaves with depression	
42	SE	Microbat	Stringybark	368713	6351812	-	-	-	Mud wasp	

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Nest box Monitoring Report
Teralba, NSW

Tag No	Cluster	Box Type	Tree Species	Easting (GDA Zone56)	Northing (GDA zone 56)	2015 Results	2016 Results	2017 Results	2018 Results	2018 Repair Notes
43	SE	Squirrel Glider	Stringybark	368715	6351809	-	Sugar Glider	-	Sugar glider 2+	
44	SE	Squirrel Glider	Spotted Gum	368693	6351782	4 Sugar Gliders	Sugar Glider	-	Leaves with depression	
45	SE	Squirrel Glider	Tallowwood	368694	6351777	Leaves	Old leaves	3 Sugar Gliders	Leaves with depression	
46	SE	Microbat	Spotted Gum	368702	6351773	-	-	-	-	
47	SE	Squirrel Glider	Spotted Gum	368714	6351761	Leaves	Leaves	-	Leaves with depression	
48	NW	Microbat	Stringybark	368046	6352726	-	-	-	N/A	Box was on ground. Replaced wire and rehung.
49	NW	Microbat	Stringybark	368059	6352714	-	-	-	-	Vine obscuring entrance. Cleared vine away.
50	NW	Microbat	Tallowwood	368037	6352732	-	-	-	-	
51	NW	Microbat	Stringybark	368008	6352747	-	-	-	-	Requires new shade cloth. Repair in 2019.
52	NW	Microbat	Tallowwood	368009	6352762	-	-	-	-	
53	NW	Microbat	Ironbark	368004	6352764	-	-	-	-	
54	NW	Microbat	Stringybark	367978	6352778	-	-	-	-	Requires new shade cloth. Repair in 2019.
55	NW	Microbat	Stringybark	367960	6352796	-	-	-	-	
56	NW	Microbat	Stringybark	367951	6352806	-	-	-	Leaves	
57	NW	Microbat	Ironbark	367931	6352840	-	-	-	Mud wasps	
58	NE	Squirrel Glider	Ironbark	368662	6352949	Leaves	Old leaves	-	New leaves, chews on hole	
59	NE	Squirrel Glider	Ironbark	368675	6352948	-	-	2 Sugar Gliders	Leaves with depression chews on hole	
60	NE	Squirrel Glider	Tallowwood	368682	6352960	Bee hive	Abandoned leaves	-	Leaves with depression and mud wasps	
61	NE	Squirrel Glider	Tallowwood	368676	6352963	Leaves	Leaves	Leaves	Leaves with depression	
62	NE	Squirrel Glider	Ironbark	368676	6353003	Leaves	Leaves	-	Sugar glider 1 +	



Nest box Monitoring Report
Teralba, NSW

Tag No	Cluster	Box Type	Tree Species	Easting (GDA Zone56)	Northing (GDA zone 56)	2015 Results	2016 Results	2017 Results	2018 Results	2018 Repair Notes
63	NE	Squirrel Glider	Ironbark	368682	6353030	Leaves	Leaves	Leaf nest	Leaves, chews on hole	
64	NE	Squirrel Glider	Stringybark	368650	6353059	Leaves	Leaves	-	Leaves with depression	
65	NE	Squirrel Glider	Ironbark	368604	6353062	1 Sugar Glider	Sugar Glider (1+)	2 Sugar Gliders	Sugar gliders 2+	
66	NE	Squirrel Glider	Tallowood	368609	6353089	Bee hive	Abandoned leaves	2 Sugar Gliders	-	
67	NE	Squirrel Glider	Spotted Gum	368588	6353061	Leaves	Leaves	-	-	
68	NE	Squirrel Glider	Spotted Gum	368561	6353099	Leaves	Sugar Glider	Leaf nest	Leaves	
69	NE	Squirrel Glider	Stringybark	368558	6353100	1 Sugar Glider	Leaves	-	Sugar glider 5	
70	SW	Microbat	Stringybark	367706	6351660	-	-	-	-	

Appendix 4

2018 T.E.N.T.A.C.L.E. Incorporated Rehabilitation Report

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T.E.N.T.A.C.L.E INC.

The Education Network Training Applying Conserving Landbased Ecosystems

Bushland Regeneration Service

ABN: 39 738 451 129

Coordinator & Director – Christy Woolcock

Treasurer – Sue McDonnell

METROMIX TERALBA BUSH REGENERATION

End of year report

2018



Prepared by Alexander Oates•Power

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Metromix Teralba – Annual Bush Regeneration Report 2018

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Metromix Teralba – Annual Bush Regeneration Report 2018

INTRODUCTION

The following report details methods and purpose, aims, objectives, hours worked, weeds controlled, results, observations and recommendations from bush regeneration work completed by Tentacle Inc. at Teralba Metromix quarry & biodiversity offset/Biobanking area.

BACKGROUND

Works by Tentacle Incorporated were carried out in accordance with all current applicable legislation including:

- Environmental Protection and Biodiversity Conservation Act 1999
- Pesticides Act 1995
- Protection of Environment Operations Act 1997
- National Parks and Wildlife Act 1974
- Threatened Species Conservation Act 1995
- Lake Macquarie City Councils Local Environmental Plan 2012

All works were compliant with the conditions of the National Parks and Wildlife Services checklist, for bush regeneration activities in the habitat of threatened species, endangered populations and endangered ecological communities.

Bush regeneration techniques applied were conformed to the best practice guidelines outlined within the Bush Regenerators handbook (National Trust of Australia, NSW 1991).

The rehabilitation works aim to improve the overall natural condition of the site by controlling invasive weed species. The rehabilitation of native vegetation will increase biodiversity within the designated area. Improved native vegetation communities will also protect waterways from increased sedimentation by enhancing erosion control and protecting and conserving the habitat for native and threatened flora and fauna. The works will improve the overall site condition encouraging an increase in native biodiversity.

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AIMS

The aims of the project are to restore and maintain ecosystem health by aiding the natural regeneration of indigenous plants and their communities. To manage the habitat for increased native biodiversity across the site by reducing the population and abundance of weed species.

These works are performed in the best interest of Metromix's BioBanking initiative by maintaining areas of healthy vegetative status and improving those that are degraded.

The aims of the project were to reduce noxious weeds, Environmental weeds, Weeds of National Significance and target weeds that were identified by the Tentacle team.

Target species this year have been:

Lantana (<i>Lantana camara</i>)	Camphor Laurel (<i>Cinnamomum camphora</i>)
Crofton weed (<i>Ageratina adenophora</i>)	Asparagus Fern (<i>Asparagus aethiopicus</i>)
Pampas grass (<i>Cortaderia selloana</i>)	Ochna (<i>Ochna serrulata</i>)
Wild tobacco (<i>Solanum mauritianum</i>)	Cassia (<i>Senna pendula</i> var. <i>glabrata</i>)
Narrow-leaf Privet (<i>Ligustrum sinense</i>)	Bitou bush (<i>Chrysanthemoides monilifera</i>)
Castor oil plant (<i>Ricinus communis</i>)	Paspalum (<i>Paspalum dilatatum</i>)
Blackberry (<i>Rubus fruticosus</i>)	Green cestrum (<i>Cestrum parqui</i>)

OBJECTIVES

The Objectives of the project are to remove the target weed species allowing the increase of biodiversity of endemic species using industry standard bush regeneration techniques for when topsoil is taken and stored there will be a healthy soil seed bank for later use in the rehabilitation proses undertaken by Metromix. To continually maintain and monitor areas that have been previously weeded and to improve the zones categorized by Eco Logical Australia in their Biobank Agreement Credit Assessment report of 2014. To plant an assortment of native plant species as part of Metromix's rehabilitation program to re-establish the previously mined areas to their former state.

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HOURS WORKED

A total of **828.5** hours have been worked at Metromix Teralba by the Tentacle Inc. staff performing environmental restoration and bush regeneration activities over 2018.

HERBICIDE USED

A total of **9.4** Liters of Roundup Biactive® Herbicide has been used for the treatment of woody and other environmental weeds this year. Roundup Biactive® Herbicide was selected as the preferred form of chemical control as it designed to be used in environmentally sensitive areas.

METHODS

In order to successfully remove the wide range of weed species on the site, several bush regeneration techniques were used.

These techniques were chosen based on 3 main basis:

- Success of destroying the plant
- Time taken to conduct the required technique
- Impacts the method will have on the surrounding native flora and fauna

These methods chosen to remove weeds include:

- The use of the cut/scrape and paint, splatter gun/spraying chemical weed control via the application of Roundup Biactive® Herbicide
- Hand removal (Hand pulling, Crowning)
- Seed head removal

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OBSERVATIONS

A number of observations have been made this year by the Tentacle team to give an idea of the diverse fauna living in the area.

These Species include:

Common Name	Scientific name
Australian Raven	<i>Corvus coronoides</i>
Bell Miner	<i>Manorina melanophrys</i>
Broad-palmed Frog	<i>Litoria latopalmata</i>
Brown Antechinus	<i>Antechinus stuartii</i>
Brown cuckoo-dove	<i>Macropygia amboinensis</i>
Channel-billed Cuckoo	<i>Scythrops novaehollandiae</i>
Dollarbird	<i>Eurystomus orientalis</i>
Eastern Whipbird	<i>Psophodes olivaceus</i>
Golden Whistler	<i>Pachycephala pectoralis</i>
Grey Fantail	<i>Rhipidura albiscapa</i>
Jacky Lizard	<i>Amphibolurus muricatus</i>
Laughing Kookaburra	<i>Dacelo novaeguineae</i>
Long-nosed Bandicoot	<i>Perameles nasuta</i>
Red-bellied black snake	<i>Pseudechis porphyriacus</i>
Spotted Pardalote	<i>Pardalotus punctatus</i>
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>
Superb Fairy-wren	<i>Malurus cyaneus</i>
Swamp Wallaby	<i>Wallabia bicolor</i>
White Bellied Sea Eagle	<i>Haliaeetus leucogaster</i>
White-browed Scrubwren	<i>Sericornis frontalis</i>
Willie Wagtail	<i>Rhipidura leucophrys</i>
Yellow-tailed black cockatoo	<i>Calyptorhynchus funereus</i>



Figure 1: Photo of a Jacky Lizard
(*Amphibolurus muricatus*)
Date taken: 27/02/2018



Figure 2: Photo of a Broad-palmed Frog
(*Litoria latopalmata*)
Date taken: 27/02/2018

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TETRATHECA

The endemic *Tetratheca jencea* that were translocated in 2015 are continuing to survive with no new reported deaths, 75% of the original recorded populations still being alive. There is no presence of weed species in the translocation area, continued maintenance weeding and monitoring will need to be completed to ensure the survival of the *Tetratheca* as it is listed as vulnerable by the Office of Environment & Heritage. No new *tetratheca jencea* plants have been spotted within the site.



Figure 3: The *Tetratheca* translocation area
Date taken: 30/08/2018

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BUSH REGENERATION

Approximately 242500m² has been worked this year in the removal of weeds such as Lantana, Pampas grass and Wild tobacco. Creating a more sustainable ecosystem within the treated areas. Large infestations of Lantana were treated with the use of a splatter gun in late November as it was deemed the most efficient way of removing the weed. The majority of bush regeneration took place in the northern and western side of the entrance boom gate along with a large area of bush land between Metromix and Rhondda road as seen in *Figure 7*.

Four days were spent removing pampas grass (*Cortaderia selloana*) along with their seed heads from the mining grounds as the plant has the ability to produce 100,000 windborne seeds per flower head. All seed heads were bagged then removed from site, then treated with Glyphosate. 100% of the Pampas grasses treated have been successfully killed. Two days were spent weeding in the bottom revegetation areas.



Figure 4: Large area of Pampas grass (*Cortaderia selloana*) before being removed
Date taken: 24/04/2018

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REVEGETATION

An assortment of trees and shrubs were planted on two shelves as seen in *Figure 5*, as part of Metromix's rehabilitation program to re-establish the areas to their former state. Revegetating the areas previously mined helps to revitalize habitats and increases the strength of the ecosystem thus creating a more diverse environment for native fauna. All plants have shown great success with an 85% survival rate since the planting commenced.

Seventeen different native species seeds were spread by Global Soil Systems in two separate areas of the site, one being adjacent to the lower northwest planted revegetation area and the other adjacent to the top shelf planted area, the success rates of the direct seeding were exceeded by approximately 50%.



Figure 5: Planting being conducted on the top shelf of the revegetation area.
Date taken: 24/07/2018

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Species Planted

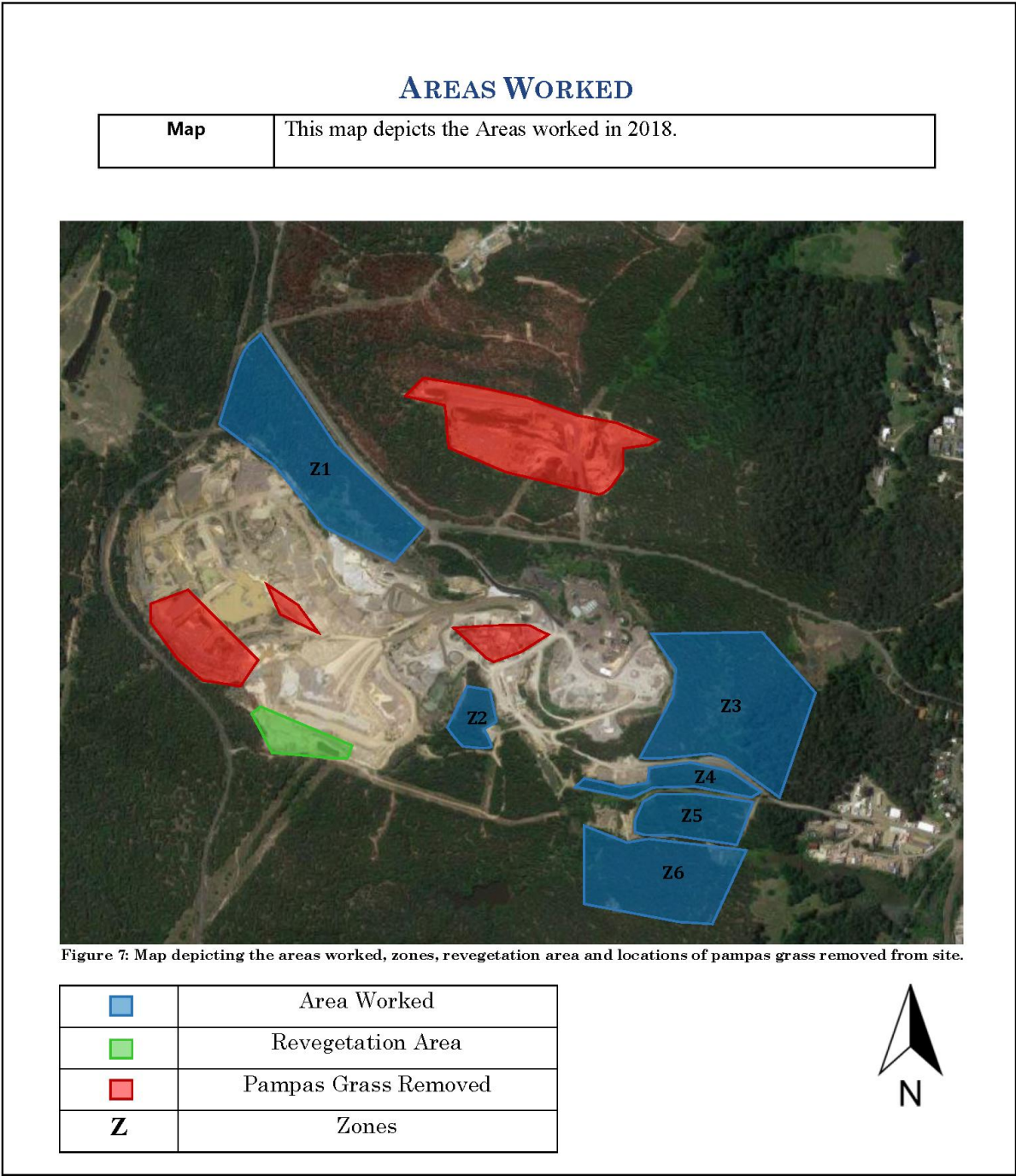
The species of plants planted in the two rehabilitation shelves include:

Common Name	Scientific Name
Prickly Moses	<i>Acacia ulicifolia</i>
Smooth-barked Apple	<i>Angophora costata</i>
Spotted Gum	<i>Corymbia maculata</i>
White Mahogany	<i>Eucalyptus acmenoides</i>
Grey Ironbark	<i>Eucalyptus paniculata</i>
Grey Gum	<i>Eucalyptus punctata</i>
Broad-leaved White Mahogany	<i>Eucalyptus umbra</i>
Prickly Shaggy-pea	<i>Podolobium ilicifolium</i>



Figure 6: Planting being conducted on the second shelf of the revegetation area.
Date taken: 24/07/2018

Metromix Teralba – Annual Bush Regeneration Report 2018



Metromix Teralba – Annual Bush Regeneration Report 2018

RECOMMENDATIONS

In order to maintain a healthy ecosystem within the areas worked, secondary and maintenance weeding will be required in the future, further primary weeding will need to be conducted in the more heavily infested areas throughout the site.

Multiple areas of *Lantana camara* were splatter gunned this year in zones 1 & 3 and will need follow-up next year. Depending on the extent of the lantana remaining, it will be determined whether it will require hand removal or further splatter gunning. It is recommended to splatter gun large infestations of *Lantana camara* within other areas of the site next year. Further pampas grass plants (*Cortaderia selloana*) require removing throughout the site as some plants still remain, secondary weeding of the pampas grasses is required before they have a chance to produce seeds.

Primary and secondary weeding is required in zones 1, 2 & 3 with secondary weeding in zones 4, 5 & 6 next year due to the level of weeds remaining in those areas. Continued maintenance weeding and monitoring will need to be completed in the *Tetratheca jencea* translocation area to ensure the survival of the *Tetratheca* as it is listed as vulnerable by the Office of Environment & Heritage. Continued maintenance weeding will need to be done in the bottom revegetation areas to ensure the natives have the best chances of survival.

Soil stockpiles will need to be assessed for weed infestation to determine if the stockpiles require weed removal before being re-spread onto reshaped overburden. Due to its high success rate, further planting is recommended in autumn as it is the best weather conditions to carry out planting.

Metromix Teralba – Annual Bush Regeneration Report 2018

CONCLUSION

In conclusion the aim and objectives have been met, the removal of target weed species allowing the increase of biodiversity of endemic species has been achieved. A great deal of Lantana and other target weeds have been cleared this year, creating a more sustainable ecosystem within the treated areas. A number of new fauna species have been observed this year showing the great diversity within the site and surrounding areas.

Approximately 242500m² has been worked this year in the removal of noxious weeds, environmental weeds, weeds of national significance and target weeds species that were identified by the tentacle team. Further treatment of weeds is required throughout the entire site, secondary weeding will need to be done next year in the areas worked to insure that the weeds removed do not have the chance to re-establish in the clears zones. Primary weeding will need to be conducted in the more heavily infested areas throughout the site.

The planting undertaken was successful with minimal losses. Continued maintenance weeding will need to be done in the large bottom section of the revegetation areas, weeding will give a better chance to the planted natives to survive, giving them more room to expand and not have to compete with the weeds.

The *Tetratheca juncea* that were transplanted have continued to thrive with no new reported deaths. Further monitoring will be completed in the future to see whether it has populated the surrounding areas and to see whether any deaths have occurred.

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PHOTO DOCUMENTATION



Figure 8: Before photo of the bottom revegetation area.
Date taken: 25/09/2017



Figure 9: After photo of the bottom revegetation area.
Date taken: 19/11/2018

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Figure 10: Before photo of the western top shelf revegetation area.
Date taken: 13/11/2017



Figure 11: After photo of the western top shelf revegetation area.
Date taken: 3/08/2018

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Figure 12: Before photo of an area of crofton and lantana in zone 3.
Date taken: 14/08/2018



Figure 13: After photo of crofton and lantana removed from zone 3.
Date taken: 20/11/2018

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Figure 14: Before photo of an area of lantana in zone 3.
Date taken: 31/07/2018



Figure 15: After photo of an area of lantana in zone 3.
Date taken: 20/11/2018

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Figure 16: A large infestation of lantana (*Lantana camara*) being splatter gunned in zone 1.
Date taken: 20/11/2018

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Appendix 5

2018 Community Consultative Committee Meeting Minutes

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**MINUTES OF MEETING
TERALBA QUARRY
COMMUNITY CONSULTATIVE COMMITTEE (CCC)**

DATE: Wednesday 9th May 2018
VENUE: Club Macquarie, Argenton
MEETING COMMENCED: 4.05pm

PRESENT:

Member Name	Organisation
Margaret MacDonald-Hill (MMH)	Independent Chairperson
Cr Wendy Harrison (WH)	Lake Macquarie City Council
Colin Wright (CW)	Community Representative
Richard Metcalf (RM)	Teralba Public School
William (Bill) Sanderson (BS)	Metromix

IN ATTENDANCE:

Name	Organisation
Lisa Andrews	Independent Minute Taker

APOLOGIES:

Nil

ITEM	ACTION
1.0 Welcome and Introductions Margaret MacDonald-Hill, opened the meeting and welcomed those present.	
2.0 Declaration of Interest MMH advised there was no change to her previous declarations; appointed by the Secretary of the Department of Planning and Environment as the Independent Chair for Teralba Quarry and a Board Member on the Mine Subsidence Board.	No changes to members' previously made declarations
3.0 Confirmation of Previous Minutes MMH asked that the previous minutes of Wednesday 11 October 2017 be confirmed.	Moved: WH Seconded: CW
4.0 Business Arising from Previous Minutes All members have completed DP&E forms and copies sent to each.	Complete
5.0 Correspondence Nil.	

<p>6.0 Reports/Project Update</p> <p>BS commenced the presentation with a video of blasting occurring on the quarry site. He explained that this happened two to three times per month.</p> <ul style="list-style-type: none"> • VPA – Road Contribution has now been registered to the title. • Biodiversity – Teralba Quarry Extension Modification 1 was approved on 16th April 2018, which amended the Biodiversity Offset Strategy and Rehabilitation conditions. <p>Details of activities from 2017 were presented:</p> <ul style="list-style-type: none"> • Sales equalled 608,000 tonnes • 35 Blasts on site • Continued financial support for Teralba Primary School, Teralba Bowling Club and the Variety Bash • Only 1 complaint was received, which related to the noise consultant parking outside the complainant's house whilst conducting monitoring – subsequently resolved. • Two non-compliances due to issues with the humidity and blast monitors. • Monitoring continues of water, air, noise, blasting and transport in accordance with approval. • The Lower Level Management Plan is in place. • Approximately 7,000 plants have been planted as part of the ongoing Rehabilitation and Weeding Program. <p>Metromix's 2017 Annual Environmental Review was submitted to the Department in March 2018 and is available for viewing on the project website: http://www.metromix.com.au/files/6915/2591/4148/Teralba_Annual_Review_2017_March_2018.pdf <i>Photos were shown of the progress with the rehabilitation sites, which are responding well.</i></p> <p>YTD 2018 Summary</p> <ul style="list-style-type: none"> • Down on YTD sales (134,000 t, compared to 169,000 t last year). • 6 Blasts so far in 2018. • One community complaint regarding the noisy braking system of one particular truck. This truck has been redeployed to another quarry. • No non-compliances. • It is expected that 2018 extraction volumes will be 100,000 t less than in 2017. • Seeding occurred in April of 0.8 hectare of land with preparation commencing for autumn 2019 planting. • The EPA Licence (536) has been modified to exclude the testing of heavy metals. The previous 2 year trial period has finished with all results being recorded within guidelines parameters. <p>2018 Activities</p> <ul style="list-style-type: none"> • The biodiversity strategy will be in place by 30th June and credits purchased by 31st December 2018. • Rehabilitation works will continue. 	
<p>GENERAL BUSINESS</p> <p>Nil.</p>	
<p>NEXT MEETING</p> <p>The next meeting will be held at Metromix Quarry, Teralba and will include an inspection of the site.</p> <p>➤ Wednesday 17 October 2018 at 4pm</p>	

Meeting closed at 4.30pm



**MINUTES OF MEETING
TERALBA QUARRY
COMMUNITY CONSULTATIVE COMMITTEE (CCC)**

DATE: Wednesday 17th October 2018
VENUE: On site - Metromix Quarry, Rhondda Rd, Teralba
MEETING COMMENCED: 4.05pm

PRESENT:

Member Name	Organisation
Margaret Macdonald-Hill (MMH)	Independent Chairperson
Colin Wright (CW)	Community Representative
Richard Metcalf (RM)	Teralba Public School
William (Bill) Sanderson (BS)	Metromix
Sara Lee (SL)	Metromix
Mo Yunusa (MY)	Metromix

IN ATTENDANCE:

Name	Organisation
Lisa Andrews	Independent Minute Taker

APOLOGIES:

Name	Organisation
Cr Wendy Harrison	Lake Macquarie City Council

All attendees undertook a site inspection of the quarry from 4.10pm to 4.49pm.

ITEM	ACTION
1.0 Welcome and Introductions MMH, opened the meeting at 4.50pm and welcomed those present.	Sara Lee & Mo Yunusa from Metromix were introduced.
2.0 Declaration of Interest MMH advised there was no change to her previous declarations; appointed by the Secretary of the Department of Planning and Environment as the Independent Chair for Teralba Quarry and a Board Member on the Mine Subsidence Board, until the board is disbanded at the end of 2018.	No changes to members' previously made declarations
3.0 Confirmation of Previous Minutes MMH asked that the previous minutes of Wednesday 9 May 2018 be confirmed.	Moved: RM Seconded: CW
4.0 Business Arising from Previous Minutes Nil.	

[illegible]

Meeting closed at 5.15pm

MMH thanked all members for their attendance.

Link 1 – Modified Consent

https://majorprojects.accelo.com/public/75146b2a1df3ded6ab88b76614aa31f5/Teralba%20Quarry_MOD%201_Consolidated%20Project%20Approval_Final.pdf

Link 2 – 2017 Annual Review

http://www.metromix.com.au/files/6915/2591/4148/Teralba_Annual_Review_2017_March_2018.pdf

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Appendix 6

2018 Community Complaints Register

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2018 Community Complaints

Date	Issue/s	Outcome
January 2018	Nil Received	
February 2018	Nil Received	
March 2018	Nil Received	
April 2018	Received a noise complaint from a Teralba resident. Noise from one particular truck brakes while slowly down and stopping at intersections within Teralba, namely the corner of Railway St and the Rail bridge and at the end of short street.	Management spoke to the owner of that particular truck and he has agreed to send it to the Teralba Quarry. The resident was notified and no more correspondence has been received from that resident.
May 2018	Nil Received	
June 2018	Nil Received	
July 2018	Nil Received	
August 2018	Nil Received	
September 2018	Nil Received	
October 2018	Nil Received	
November 2018	Nil Received	
December 2018	Nil Received	

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