

Champions Quarry Expansion

**ANNUAL REVIEW
2015**

Contents	<i>i</i>
Glossary	<i>ii</i>

1 BACKGROUND AND OVERVIEW	1
1.1 BACKGROUND	1
1.2 OVERVIEW	1
2 PREVIOUS AND FUTURE DEVELOPMENT	1
2.1 DEVELOPMENT CARRIED OUT DURING 2014.....	1
2.2 PROPOSED DEVELOPMENT CARRIED OUT/TO BE CARRIED OUT DURING 2015 ...	3
3 AMENDMENTS TO CONDITIONS	4
4 REVIEW OF MONITORING RESULTS	5
4.1 NOISE MONITORING.....	5
4.2 SOIL AND WATER MONITORING.....	6
4.3 AIR QUALITY MONITORING	8
5 REVIEW OF COMPLAINTS RECORDS.....	8
6 AREAS OF NON-COMPLIANCE.....	8
7 TRENDS IN MONITORING DATA OVER THE LIFE OF THE PROJECT.....	8
8 DISCREPANCIES BETWEEN PREDICTED AND ACTUAL IMPACTS OF THE PROJECT	9
9 MEASURES TO BE IMPLEMENTED TO IMPROVE ENVIRONMENTAL PERFORMANCE	9
10 PRODUCTION DATA	9

LIST OF TABLES

Table 3.1 – Modifications, Extension and Staging of the Conditions of Approval

Table 4.1 – Receivers Locations for Noise Assessment

ANNEXURES

Annexure A – Champions Quarry Noise Monitoring Results

Annexure B – Champions Quarry Surface Water Monitoring Results (MP 1-6)

Annexure C – Champions Quarry Water Reuse Dam MP 7

Annexure D – Champions Quarry Groundwater Monitoring Results (MP 8-10)

Annexure E – Champions Quarry Air Quality/Dust Monitoring Results

Annexure F – Champions Quarry Part 3A Complaints Register

GLOSSARY

ANZECC Guidelines	Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000) default trigger level for slightly disturbed ecosystem in in south eastern Australia for upland and lowland rivers
CCC	Community Consultative Committee
DG	Director-General (or a delegate) of the Department of Planning and Infrastructure
DoP	Department of Planning
DP & I	Department of Planning and Infrastructure previously known as DoP
DRE	Division of Resources and Energy within the Department of Trade and Investment, Regional Services and Infrastructure
EA	Champions Quarry Expansion, Environmental Assessment Report prepared by ERM Pty Limited and dated February 2010
EA Documents	Incorporating the EA, RTS and PPR documents
EPA	NSW Environment Protection Authority
INP	NSW Department of Environment, Climate Change and Water's (DECCW) Industrial Noise Policy (INP), (EPA 2000)
LCC	Lismore City Council
NAL	Noise Assessment Location
NOW	NSW Office of Water, within the Department of Primary Industries
Notice of Modification	Any Notice of Modification issued pursuant to Section 75W of the EP & A Act
NHMRC Guidelines	National Health and Medical Research Council (2004) Australian Drinking Water Guidelines
OEH	Office of Environment and Heritage within the Department of Premier and Cabinet
PPR	Champions Quarry Expansion, Preferred Project Report prepared by ERM Pty Limited and dated December 2011
Project Approval	Project Approval/Conditions of Approval (incorporating the Statement of Commitments) issued by Planning and Assessment Commission of New South Wales dated 30 August 2012 as amended

Proponent	Champions Quarry 2 Pty Ltd and any other entity or person who seeks to carry out the development approved under the Project Approval
RMS	Roads and Maritime Services
Response to Submissions (RTS)	Champions Quarry Response to Submissions, prepared by ERM Pty Limited and dated September 2010 and containing the Proposed Quarry Management Plan
Statement of Commitment	Statement of Commitment (contained within Appendix 3 of the Project Approval)

1 BACKGROUND AND OVERVIEW

1.1 BACKGROUND

This report has been prepared in response to Condition 4 of Schedule 5 of the Champions Quarry Part 3A Project Approval number 09_0080 (the 'Project Approval'). The report provides an overview of progress on compliance issues and elaborates on planned activities for the coming year.

Condition 4 of Schedule 5 of the Project Approval states:

“By the end of March each year, the Proponent shall review the environmental performance of the project to the satisfaction of the Director-General. The review must:

- (a) describe the development (including rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;*
- (b) include a comprehensive review of the monitoring results and complaints records of the project over the previous calendar year, which includes a comparison of these results against:
 - the relevant statutory requirements, limits or performance measures/criteria;*
 - the monitoring results of previous years; and*
 - the relevant predictions of the EA;**
- (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.”*

1.2 OVERVIEW

Up until 4 July 2014 Champions Quarry was operating under the existing Lismore City Council Development Consent (DA 2005/999). At midnight on 4 July 2014 the Lismore City Council Development Consent was surrendered and Champions Quarry commenced quarrying operations under the Project Approval.

2 PREVIOUS AND FUTURE DEVELOPMENT

2.1 DEVELOPMENT CARRIED OUT DURING 2014

- Schedule 2, Condition 5 – Subdivision: The Proponent subdivided the Land on site generally in accordance with the subdivision plan annexed to the Project Approval. The quarry site has been subdivided and the quarry is now located on Lot 5 DP1191905.

- Schedule 2, Condition 11 – Unsealed “Farm Road”: The unsealed “farm road” that connects the Central Extraction Area to Hazlemount Lane has been cut by the construction of the Water Reuse Dam, the balance of the “farm road” has been ripped and sowed with seed.
- Schedule 2, Condition 13 – Surrender of Existing Consent: Effective midnight on 4 July 2014 (extended from December 2013 with the Director-General’s consent), the Proponent surrendered the Lismore City Council Development Consent (DA 2005/999).
- Schedule 3, Condition 1 – Survey Areas: Prior to carrying out quarrying operations under the Project Approval, the Proponent engaged a surveyor to mark out the boundaries of the approved limits of extraction for the Central Extraction Area and Progression 1 of the Western Quadrant of the Southern Extraction Area. Surveying is to be staged as provided for with the Director-General’s consent.
- Schedule 3, Condition 9 – Noise Management Plan: The Noise Management Plan was approved by the Director-General on 19 June 2014 and is publicly available on Champions Quarry website.
- Schedule 3, Condition 12 – Air Quality Management Plan: The Air Quality Management Plan was approved by the Director-General on 5 February 2014 and is publicly available on Champions Quarry website.
- Schedule 3, Condition 17 – Water Management Plan: The Water Management Plan received interim approval from the Director-General on 19 June 2014. A copy of the interim plan is publicly available on Champions Quarry website. The Proponent awaits final approval by the Director-General. Once final approval is received the plan will be publicly available on Champions Quarry website.
- Schedule 3, Condition 18 – Planting Grasses/Shrubs/Trees: The Proponent has constructed and planted the following:
 - Bund A – Constructed, vegetated with grasses, some native endemic shrubs and trees;
 - Bund B – Constructed, vegetated with grasses;
 - Bund C – Constructed, vegetated with grasses;
 - Bund D – Constructed, vegetated with grasses;
 - Bund E – Not yet constructed;
 - Bund F – Not yet constructed; and
 - Area to the North of the Main Access Road – Area constructed, vegetated with grasses.
- Schedule 3, Condition 23 – Intersection Upgrades: The Proponent upgraded the following intersections in accordance with LCC’s approved plans derived from the conceptual layout plans (Appendix 5 of the Project Approval):
 - Coraki Road/Wyrallah Ferry Road intersection to provide a sealed turning path for southbound trucks and trucks with trailers from Coraki Road into Wyrallah Ferry Road; and
 - Wyrallah Road/Wyrallah Ferry Road intersection to provide a sealed left-turn lane for northbound trucks and trucks with trailers from Wyrallah Road into Wyrallah Ferry Road.

- Schedule 3, Condition 24 – Road Safety Audit: The Proponent carried out a road safety audit of LCC approved bus stops along the haulage routes and submitted the report to the Director-General. No recommendations were required to be actioned or implemented by the Proponent.
- Schedule 3, Condition 25 – Road Signage: The Proponent has cleared the roadside vegetation on the approach to the Wyrallah Road/Wyrallah Ferry Road intersection. The Proponent has instructed and paid LCC to carry out the following:
 - the installation of an intersection distance advisory sign on the approach to the Wyrallah Road/Wyrallah Ferry Road intersection;
 - install hinged “trucks entering” warning signs 200 metres either side of the quarry entrance; and
 - install Koala crossing signs along Wyrallah Road on either side of the quarry entrance.
- Schedule 3, Condition 31 – Transport Management Plan: The Transport Management Plan was approved by the Director-General on 19 June 2014 and is publicly available on Champions Quarry website.
- Schedule 3, Condition 33 – Waste Management Plan: The Waste Management Plan was approved by the Director-General on 19 June 2014 and is publicly available on Champions Quarry website.
- Schedule 3, Condition 37 – Setback from Dry Rainforest/Lowland Rainforest EEC: Prior to carrying out quarrying operations under the Project Approval, the Proponent engaged a surveyor to mark out the boundaries of the approved limits of extraction for the Southern Extraction Area and to ensure that the area is setback at least 50 metres from the mapped Dry Rainforest/Lowland Rainforest EEC on site.
- Schedule 3, Condition 40 – Biodiversity Offset Strategy: The Proponent engaged a surveyor to mark out the precise boundaries of the Biodiversity Offset Strategy Areas and prepare an associated survey plan.
- Schedule 3, Condition 45 – Landscape Management Plan: The Landscape Management Plan was approved by the Director-General on 19 June 2014 a copy of the plan is publicly available on Champions Quarry website. Further clarification was sought by the DP & I and a revised plan was resubmitted to DP & I. The Proponent awaits approval by the Director-General. Once approved the revised plan will be publicly available on Champions Quarry website.
- Schedule 5, Condition 6 – Community Consultative Committee: The CCC held its 2014 meetings on 25 February 2014 and 28 August 2014. A copy of the draft and final meeting minutes are publicly available on Champions Quarry website.
- Statement of Commitments 5 – Seal the Main Access Road: The main access road from the site entrance to the Central Extraction Area was sealed in June 2014.

Other Activities not specified in the Project Approval:

- Water Reuse Dam – The construction of the 40ML Water Reuse Dam was constructed in 2014.

2.2 PROPOSED DEVELOPMENT CARRIED OUT/TO BE CARRIED OUT DURING 2015

- Schedule 3, Condition 16 – Storage of Chemicals and Petroleum Products: Upon erection of a storage, maintenance and equipment shed onsite, an appropriately bunded area with impervious flooring and of sufficient capacity to contain 110% of the largest container stored within the bund and in accordance with Australian Standard AS1940-2004 will be installed.
- Schedule 3, Condition 19 – Planting Trees: The Proponent will during 2015 plant the following:
 - Bund A – To be planted with a single row of native endemic shrubs and trees;
 - Bund B – To be planted with native endemic shrubs and trees;
 - Bund C – To be planted with native endemic shrubs and trees;
 - Bund D – To be planted with native endemic shrubs and trees; and
 - Vegetative screening to the north of the access road.
- Schedule 3, Condition 42 – Long Term Security of Offsets: By the end of December 2014 (extended from June 2014 at the Director-General's instigation) the Proponent was to make suitable arrangements to provide appropriate long term security for all of the offset areas in the Biodiversity Offset Strategy. The Proponent and the DP & I are discussing options with the view to finalise the form of security and contents.
- Schedule 3, Condition 46 – Conservation and Rehabilitation Bond: The Proponent and the DP & I are discussing Rehabilitation Bond requirements with the view to finalise the amount in 2015.
- Schedule 3, Condition 47 – Independent Environmental Audit: An Independent Environment Audit is due to be carried out in 2015. Within 3 months of the Independent Environmental Audit, the Proponent must review the Conservation and Rehabilitation Bond.
- Schedule 5, Condition 6 – Community Consultative Committee: The CCC is due to hold two meetings in 2015 in March and September/October 2015.
- Schedule 5, Condition 9 – Independent Environmental Audit: An Independent Environment Audit is due to be commissioned and paid for by 4 July 2015.

Other Activities not specified in the Project Approval:

- Maintenance Shed – The Proponent proposes to erect a storage, maintenance and equipment shed onsite being approximately 500m². Construction may commence in 2015.
- Bunds – The Proponent proposes to construct bunds as and when required for noise and visual attenuation purposes within the “Operational Area” of the quarry as specified in the relevant management plans.

3 AMENDMENTS TO CONDITIONS

Up until March 2015 various modifications, extension and staging of the Conditions of Approval have been sought and approved. Below is an overview of the approved modifications, extension and staging.

Table 3.1 – Modifications, Extension and Staging of the Conditions of Approval

Date	Type	Schedule	Condition	Effect of Modification
28/10/2013	STG (Letter)	3	1	Staging the surveying of the boundaries so that initially only the Central Extraction Area and Stage 1 (being the Western Quadrant of the Southern Extraction Area) of the Southern Extraction Area are surveyed and a survey plan submitted to the DG.
29/10/2013	NoM 1	2	5	Subdivide land 'generally' in accordance with subdivision plan at Appendix 4.
29/10/2013	NoM 1	2	9	New (a1) – Cannot extract more than 100,000 tonnes of extractive material from the site in any calendar year without having first installed a weighbridge.
29/10/2013	NoM 1	3	26(a)	Replace 26(a) – quantity is based on accredited scales fitted to front end loaders or weighbridge records until the end of December 2015, and thereafter based on weighbridge records only.
29/10/2013	NoM 1	Appendix 4	Figure 6	New Figure 6 in Appendix 4 – Lands to be subdivided.
18/03/14	EXT (Letter)	2	13	Extension to surrender existing development consent (DA 2005/999) until 30 June 2014.
18/03/14	EXT (Letter)	3	42	Replace 42 – By the end of June 2014, the Proponent shall make suitable arrangements to provide appropriate long-term security for all offset areas in the Biodiversity Offset Strategy (apart from tree screening on the northern side of the quarry access road).
27/06/14	EXT (Letter)	2	13	Extension to surrender existing development consent (DA 2005/999) until 2 July 2014.
3/07/14	EXT (Letter)	3	42	Replace 42 – By the end of December 2014, the Proponent shall make suitable arrangements to provide appropriate long-term security for all offset areas in the Biodiversity Offset Strategy (apart from tree screening on the northern side of the quarry access road).
13/1/15	EXT (Letter)	2	12	Sealing the internal haul road linking the Southern and Central Extraction Areas offers little benefit. Watering unsealed quarry haul roads as required is sufficient.
13/1/15	EXT (Letter)	5	9	Extension of time to commission and pay the full cost of an Independent Environmental Audit by 4 July 2015
EXT – Extension of time with DG's consent (granted via letter) STG – Staging of strategy, plan or program (granted via letter) NoM – Notice of Modification				

4 REVIEW OF MONITORING RESULTS

Noise, water and air quality testing was carried out by the Proponent in 2014 in accordance with the Project Approval.

4.1 NOISE MONITORING

Six noise assessment locations were identified in the EA Documents and Project Approval. These are detailed in Table 4.1 below.

Table 4.1 – Receivers Locations for Noise Assessment

Receiver Number	Description	AMG Coordinates	Approximate distance from Project area boundary (m)
NAL 1	Residence	531089, 6799150	810
NAL 2	Residence	531738, 6798473	330
NAL 2A	Residence	Adjacent to Receiver 2's	380

		location	
NAL 3	Residence	532043, 6798156	510
NAL 4	Residence	530867, 6797990	220
NAL 5	Residence	Adjacent to Receiver 4's location	450
NAL 1 – 1566 Wyrallah Road, Tucki Tucki NAL 2 – 139 Hazlemount Lane, Tuckurimba NAL 2A – 115 Hazlemount Lane, Tuckurimba NAL 3 – 140 Hazlemount Lane, Tuckurimba NAL 4 – 1682 Wyrallah Road, Tuckurimba NAL 5 – South Western Corner of Wyrallah Road and Tuckurimba Road, Tuckurimba Receiver locations are shown in Appendix 1 of the Project Approval			

Five sets of operator attended noise testing were carried out during 2014 since the Proponent commenced quarrying operations under the Project Approval in July 2014. All results were compliant with the relevant criteria. A copy of the noise monitoring results and relevant limits are attached as Annexure A.

4.2 SOIL AND WATER MONITORING

Surface and Groundwater Monitoring Points

Ten water monitoring points were identified in the EA Documents as relevant for water monitoring. These are set out below:

Surface Water Monitoring Points:

1. A point immediately upstream of Tucki Tucki Creek (with no impact from the Quarry);
2. A point immediately downstream of Tucki Tucki Creek (2.5 kilometres from the Quarry's Operational Area);
3. A point of the onsite watercourse;
4. Downstream of the Operational Area (a continuation of the onsite watercourse referred to in Monitoring Point 3 above);
5. Discharge point of the Water Reuse Dam;
6. Stormwater overflow monitoring point for the Water Reuse Dam (only to be tested prior to discharge); and
7. Water Reuse Dam (pH levels only).

Ground Water Monitoring Points:

8. Borehole 3 (Groundwater Level and Quality Monitoring);
9. Borehole 5 (Groundwater Level and Quality Monitoring); and
10. Borehole 6 (Groundwater Level and Quality Monitoring).

Surface and Groundwater Criteria

Champions Quarry is currently collecting baseline data from all surface water monitoring locations (Monitoring Points 1–7) and groundwater monitoring locations (Monitoring Points 8–10) to determine statically derived site specific trigger levels. In the interim, in accordance with the EA Documents, Champions Quarry have compared the monitoring results against the following:

- Surface water monitoring (Monitoring Points 1-7) are compared against ANZECC Guidelines; and
- Ground water monitoring results (Monitoring Points 8 – 10) are compared against ANZECC Guidelines and NHMRC Guidelines.

Surface Water Testing – Monitoring Points 1-7

A copy of the surface water testing schedule and monitoring results for Monitoring Points 1-6 and the relevant limits are attached as Annexure B. A copy of the monitoring results for Monitoring Point 7 and the relevant limits are attached as Annexure C.

Despite several attempts, successful samples were only collected from Monitoring Points 1, 5 and 7 in 2014 due to insufficient water levels and/or the absence of discharge.

There have been some deviations between the baseline data collected at Monitoring Points 1, 5 and 7 and the ANZECC Guidelines. These are identified in Annexure B and C as being highlighted in **bold**. Both Monitoring Points 1 and 5 had the same deviations which are set out below (despite the fact that Monitoring Point 1 is upstream of the Quarry):

- pH levels were below the ANZECC Guidelines – The EA Documents note that the pH of nearby soil and receiving waters are mildly acidic pH 4.5 – pH 5.3. The natural acidic soil conditions encountered at the Project Site and subsequent influence on runoff may require that maintenance of ambient condition is the preferred water quality goal. Hence, adjusting the pH to neutral conditions may result in unintended impacts on downstream aquatic ecosystems.
- Aluminium levels were above the ANZECC Guidelines – Champions Quarry has no control over the levels of Monitoring Point 1 as Monitoring Point 1 is in Tucki Tucki Creek and upstream of the Quarry. Monitoring Point 5 shows higher aluminium levels, this is consistent with baseline data collected closer to the Quarry during 2008.
- Cadmium levels were potentially below the ANZECC Guidelines – However the given breakdown by EAL Laboratories was inconclusive. Future tests by EAL Laboratories have been amended to be more precise to ascertain whether levels are above the trigger level of 0.002mg/L.

pH levels are monitored weekly at Monitoring Point 7. These levels were consistently below the ANZECC Guidelines. The EA Documents note that the pH of nearby soil and receiving waters are mildly acidic pH 4.5 – pH 5.3. The natural acidic soil conditions encountered at the Project Site and subsequent influence on runoff may require that maintenance of ambient condition is the preferred water quality goal. Hence, adjusting the pH to neutral conditions may result in unintended impacts on downstream aquatic ecosystems.

More generally, deviations were anticipated in the EA Documents and are expected given that the ANZECC Guidelines are interim guidelines until statically derived site specific trigger levels are determined.

Ground Water Testing – Monitoring Points 8-10

A copy of the ground water monitoring results for Monitoring Points 8-10 and the relevant limits are attached as Annexure D. Despite several attempts, only one successful sample was collected from Monitoring Points 8-10 between commencement in July and the end of 2014.

Groundwater quality samples levels were consistently below the ANZECC Guidelines and NHMRC Guidelines trigger values with the exception of pH. The EA Documents note that the pH of nearby soil and receiving waters are mildly acidic pH 4.5 – pH 5.3. The natural

acidic soil conditions encountered at the Project Site and subsequent influence on runoff may require that maintenance of ambient condition is the preferred water quality goal. Hence, adjusting the pH to neutral conditions may result in unintended impacts on downstream aquatic ecosystems.

Stripping Operations

Stripping operations were carried out in the second half of 2014 in Progression 1 of the Western Quadrant of the Southern Extraction Area. Targeted sub-surface archaeological investigations occurred prior to constructing the Water Reuse Dam and prior to commencing works in the Southern Extraction Area. No Aboriginal objects were identified during the archaeological excavations.

In addition, all Project employees who are involved in clearing, grubbing and ground disturbance works receive educational material and continuing education via ongoing toolbox meetings with respect to identification and management of unidentified Aboriginal objects.

4.3 AIR QUALITY MONITORING

A copy of the air quality monitoring results and relevant limits are attached as Annexure E. All results were compliant and significantly below the criteria of 4g/m²/month.

5 REVIEW OF COMPLAINTS RECORDS

A copy of the complaints records under the Part 3A since July 2014 is attached as Annexure F. Records indicate that since July 2014, there were 3 complaints, all as a result of noise at the Quarry, and all from NAL 2. One of the complaints was requested by Champions Quarry to be registered as non-legitimate with the NSW Department of Planning. Noise Testing was carried out, as a result of the complaints, which proved to be compliant with the relevant criteria. The complainant was then notified of the outcome.

6 AREAS OF NON-COMPLIANCE

Noise Management

All results were compliant with the relevant criteria.

Soil and Water Management

There have been some deviations between the baseline data collected at Monitoring Points 1, 5, 7, 8, 9 and 10 and the relevant guidelines (as discussed above).

Air Quality Management

All results were compliant and significantly below the criteria of 4g/m²/month.

7 TRENDS IN MONITORING DATA OVER THE LIFE OF THE PROJECT

Given the relatively short testing program to date it is difficult to comment on the trends in monitoring data other than to say:

- All noise monitoring results have shown compliance with the relevant criteria.
- Water monitoring results in the form of baseline data are currently being collected in order to determine statically derived site specific trigger levels. In the interim Champions Quarry have compared the monitoring results against the following:
 - Surface water monitoring results are compared against ANZECC Guidelines; and

- Ground water monitoring results are compared against ANZECC Guidelines and NHMRC Guidelines.

There have been some deviations (discussed above) between the relevant guidelines and baseline data collected. However, this was anticipated in the EA Documents and is expected, given baseline data is being collected to determine statically derived site specific trigger levels.

- All air quality monitoring results have shown compliance with the relevant criteria.

8 DISCREPANCIES BETWEEN PREDICTED AND ACTUAL IMPACTS OF THE PROJECT

At this stage there are no discrepancies between the predicted and actual impacts of the Project, particularly given the relatively short period since the Proponent commenced quarrying operations under the Project Approval and the limited testing program to date.

9 MEASURES TO BE IMPLEMENTED TO IMPROVE ENVIRONMENTAL PERFORMANCE

No measures at this stage. However an Independent Environmental Audit is due to be carried out in 2015. As a result, measures may be identified and implemented to improve environmental performance.

10 PRODUCTION DATA

In accordance with Schedule 2, Condition 19 of the Project Approval, production data is required to be included in the Annual Review.

At this stage no annual data has been submitted to DRE. Annual Production Data aligns with the financial year and will be lodged with DRE at the closure of the 2014/2015 financial year and included in the 2016 Annual Review.

ANNEXURE A

**CHAMPIONS QUARRY
NOISE MONITORING RESULTS**

Date	Location	Type of Noise Monitoring	Relevant Criteria	Result	Compliance/ Non-Compliance	If Non-Compliance - Reasons
5/08/2014	NAL 3	Additional Operational Testing	37	33.9	Compliance	N/A
5/08/2014	NAL 3	Additional Operational Testing	37	32.65	Compliance	N/A
26/09/2014	NAL 2	Receiver Complaint	37	34.9	Compliance	N/A
4/11/2014	NAL 2	Routine - Quarterly	37	33.08	Compliance	N/A
4/11/2014	NAL 3	Routine - Quarterly	37	34.72	Compliance	N/A

ANNEXURE B

CHAMPIONS QUARRY
SURFACE WATER MONITORING RESULTS (MP1-MP6)

Monitoring Point	Date	Sampling Conditions	pH	Conductivity	Nitrate (NO ₃)	Aluminium (Al)	Total Arsenic (As)	Cadmium (Cd)	Total Chromium (Cr)	Copper (Cu)	Mercury (Hg)	Nickel (Ni)	Oil & Grease	Total Suspended Solids	Lead (Pb)	Zinc (Zn)
ANZECC 2000 Trigger Values ¹			6.5-8.5 ²	1.5 (dS/m)	0.7 (mg/L)	0.055 (mg/L)	0.024 (mg/L)	0.0002 (mg/L)	n/s (mg/L)	0.0014 (mg/L)	0.0006 (mg/L)	0.011 (mg/L)	No visible sheen or detectable odour	50 (mg/L) ³	0.0034 (mg/L)	0.008 (mg/L)
MP1	17/06/2014	Flow	5.85	0.157	<0.005	0.808	<0.001	<0.001	0.001	0.001	<0.0005	0.001	None	4	<0.001	0.004
	23/10/2014	Flow	7.13	0.159	0.014	0.1	<0.001	<0.001	<0.001	0.001	<0.0005	0.001	None	9	<0.001	<0.001
	22/01/2015	Flow	6.98	0.196	<0.005	0.11	<0.001	<0.001	<0.001	0.001	<0.0005	0.001	None	10	<0.001	0.002
MP2	17/06/2014	No Discharge	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	23/10/2014	No Discharge	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22/01/2015	No Discharge	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MP3	17/06/2014	Insufficient Water Levels	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	23/10/2014	Insufficient Water Levels	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22/01/2015	Insufficient Water Levels	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MP4	17/06/2014	Insufficient Water Levels	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	23/10/2014	Insufficient Water Levels	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22/01/2015	Insufficient Water Levels	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MP5	17/06/2014	No discharge from WRD	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	23/10/2014	Yes	5.54	0.102	0.015	0.35	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	None	44	<0.001	0.001
	22/01/2015	Yes	5.29	0.123	<0.005	0.184	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	None	6	<0.001	0.002
MP6	17/06/2014	No Discharge	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	23/10/2014	No Discharge	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22/01/2015	No Discharge	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MP7 (pH Only)	SEE ALTERNATIVE TABLE															

1. Initially data will be compared against ANZECC Trigger Values with the aim to develop site specific trigger levels after 2 years of operations once a larger data set is available.

2. pH level required will be reviewed following collection of baseline monitoring data in accordance with the Project Approval. Specifically it is noted that the pH of nearby soil and receiving waters are mildly acidic pH4.5-pH5.3. The natural acidic soil conditions encountered at the Project Site and subsequent influence on runoff may require that maintenance of ambient condition is the preferred water quality goal.

3. Maximum level once the stormwater management system is constructed and operational. Exceedance permitted at overflow point for duration of overflow when wet weather overflow is occurring due to stormwater events $\geq 71\text{mm}$ in total falling over any consecutive 5 day period.

4. Data in **bold** indicates the data is outside the trigger levels.

ANNEXURE C

CHAMPIONS QUARRY WATER RE-USE DAM (MP7) - pH RESULTS

Monitoring Point	Date	pH
		6.5-8.5 ¹
MP7	17/06/2014	5.24
MP7	24/06/2014	5.32
MP7	7/07/2014	5.51
MP7	15/07/2014	5.72
MP7	22/07/2014	5.27
MP7	29/07/2014	5.49
MP7	5/08/2014	5.70
MP7	12/08/2014	5.27
MP7	18/08/2014	5.36
MP7	26/08/2014	5.41
MP7	3/09/2014	5.51
MP7	9/09/2014	5.85
MP7	18/09/2014	5.72
MP7	24/09/2014	5.63
MP7	2/10/2014	5.81
MP7	9/10/2014	5.70
MP7	15/10/2014	5.76
MP7	23/10/2014	5.54
MP7	28/10/2014	5.68
MP7	4/11/2014	5.71
MP7	TESTER UNAVAILABLE	-
MP7	19/11/2014	5.62
MP7	24/11/2014	5.65
MP7	2/12/2014	5.53
MP7	9/12/2014	5.61
MP7	17/12/2014	5.57
MP7	26/12/2014	5.81
MP7	2/01/2015	5.76

Notes

1. Initially data will be compared against ANZECC pH Trigger Values with the aim to develop site specific trigger levels after 2 years of operations once a larger data set is available to evaluate the optimum outcome for the water quality of discharge waters. Specifically it is noted that the pH of nearby soil and receiving waters are mildly acidic pH4.5-pH5.3. The natural acidic soil conditions encountered at the Project Site and subsequent influence on runoff may require that maintenance of ambient condition is the preferred water quality goal.

2. Data in **bold** indicates the data is outside the trigger levels.

ANNEXURE D

CHAMPIONS QUARRY
GROUNDWATER MONITORING RESULTS (MP8-MP10)

Monitoring Point	Date	Sampling Conditions	pH	Conductivity (dS/m)	Nitrate (NO ₃) (mg/L)	Aluminium (Al) (mg/L)	Total Arsenic (As) (mg/L)	Cadmium (Cd) (mg/L)	Total Chromium (Cr) (mg/L)	Copper (Cu) (mg/L)	Mercury (Hg) (mg/L)	Nickel (Ni) (mg/L)	Lead (Pb) (mg/L)	Zinc (Zn) (mg/L)	Recharge Rate (L/Hour)
ANZECC 2000 Trigger Values ¹			6.5 - 8.5 ³	1.5	0.7	0.055	0.024	0.0002	n/s	0.0014	0.0006	0.011	0.0034	0.008	N/A
NHMRC Drinking Water Guidelines ²			6.5 - 8.5 ³	n/s	50	0.2	0.01	0.002	0.05	2	0.001	0.02	0.01	3	N/A
MP8	17/06/2014	Unable to Collect Sample	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/10/2014	Unable to Collect Sample	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/11/2014	Sample Collected	3.66	0.448	0.11	0.131	<0.001	<0.001	<0.001	0.002	<0.0005	0.007	0.002	0.044	0.86
	22/01/2015	Sample Collected	3.81	0.736	0.083	0.118	0.001	<0.001	0.001	0.002	<0.0005	0.01	0.001	<0.054	0.58
MP9	17/06/2014	Unable to Collect Sample	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/10/2014	Unable to Collect Sample	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/11/2014	Sample Collected	5.38	0.257	0.025	0.023	<0.001	<0.001	<0.001	0.001	<0.0005	0.001	<0.001	0.019	1.25
	22/01/2015	Sample Collected	5.34	0.317	0.033	0.036	<0.001	<0.001	<0.001	0.001	<0.0005	0.001	0.001	0.019	1.88
MP10	17/06/2014	Unable to Collect Sample	-	-	-	-	-	-	-	-	-	-	-	-	-
	2/10/2014	Unable to Collect Sample	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/11/2014	Sample Collected	6.1	0.212	0.029	0.074	<0.001	<0.001	0.001	0.002	<0.0005	0.001	<0.001	0.01	0.92
	22/01/2015	Sample Collected	4.91	0.143	0.008	0.108	<0.001	<0.001	0.001	<0.001	<0.0005	0.002	0.001	0.015	1.29

1. Initially data will be compared against ANZECC Trigger Values with the aim to develop site specific trigger levels after 3 years of operations once a larger data set is available.

2. Initially data will be compared against NHMRC Drinking Water Guidelines with the aim to develop site specific trigger levels after 3 years of operations once a larger data set is available.

3. pH level required will be reviewed following collection of baseline monitoring data in accordance with the Project Approval. Specifically it is noted that the pH of nearby soil and receiving waters are mildly acidic pH4.5-pH5.3. The natural acidic soil conditions encountered at the Project Site and subsequent influence on runoff may require that maintenance of ambient condition is the preferred water quality goal.

4. Data in **bold** indicates the data is outside the trigger levels.

ANNEXURE E

CHAMPIONS QUARRY AIR QUALITY / DUST MONITORING RESULTS

Sample Point	Exposure Period	Sampling Days (30 days +/- 2)	Sample Comments	Sample Volume (L)	Deposit Rate of Insoluble Solids Total		Deposit Rate of Ash (g/m ² /mth) Limit - 2g/m ² /mth	Deposit Rate of Combustible Matter (g/m ² /mth)
					(g/m ² /mth) Limit - 4g/m ² /mth	(mg/m ² /day)		
Receiver 2	1/8/14 - 1/9/14	31 days	Sample unsuccessful - excess rain, DDG overflowed	N/A	-	-	-	-
Receiver 2	1/9/14 - 2/10/14	31 days	-	0.560L	0.2	6	0.1	0.1
Receiver 2	2/10/14 - 2/11/14	31 days	-	0.220L	0.8	26	0.4	0.4
Receiver 2	2/11/14 - 2/12/14	30 days	Small amount of organic matter present	1.1L	2.4	80	0.5	1.9
Receiver 2	2/12/14 - 2/1/15	31 days	Sample unsuccessful - excess rain, DDG overflowed	N/A	-	-	-	-

Notes

1. Data in **bold** indicates the data is outside the trigger levels.

ANNEXURE F

**CHAMPIONS QUARRY
PART 3A COMPLAINTS REGISTER**

Date of Complaint	Time of Complaint	Addressed to	From	Subject	Date/Time of Activity Complained Of	Written or Verbal	Date Received Complaint	Action
26/09/2014	10:35am	Champions Quarry	Kim Woolley (NAL 2)	Noise complaint	Morning of 26/09/14	Written - Email	26/09/2014	Conducted noise monitoring at NAL 2 on 26/09/14. Results were compliant with relevant noise criteria. Advised Complainant.
29/09/2014	1:39pm	Champions Quarry	Lachlan Woolley (NAL 2)	Noise complaint	Day of 29/09/14	Written - Email	29/09/2014	Requested complaint be registered as non-legitimate with the NSW Department of Planning. Advised Complainant.
4/03/2015	11:34am	Champions Quarry	Chris Woolley (NAL 2)	Noise complaint	Day of 3/03/15 and 4/03/15	Written - Email	4/03/2015	Ceased excavation until noise testing was carried out. Conducted noise monitoring at NAL 2 on 05/03/15. Results were compliant with relevant noise criteria. Advised Complainant.