



Ref: L41818/BH/15-041

18 December 2018

Quarry Solutions Pty Ltd  
c/- Groundwork Plus  
6 Mayneview Street  
MILTON QLD 4064

**Attention: Mr Jim Lawler**

Dear Jim

**Re: December 2018 Noise Compliance Monitoring – Coraki Quarry, Coraki**

MWA Environmental conducted noise compliance monitoring for the Coraki Quarry in December 2018 in accordance with Condition 5(c) of the Development Consent Schedule 3.

Quarry Solutions Pty Ltd has advised that no noise complaints have been received in relation to the Coraki Quarry since the previous September 2018 noise monitoring event.

Noise monitoring was undertaken between 7:00am and 12:00pm on 11 December 2018.

Weather conditions during the early monitoring period were dominated by no wind, high humidity and a thick fog extending across the region which remained evident until well after 8am. Residents noted the fog as atypically heavy. Whilst no objective assessment could be made, there is the potential that temperature inversion conditions associated with the significant fog event affected measurements prior to 8am to the extent that the conditions may not have been valid conditions for the assessment of compliance with the noise limit specified in the Development Consent and Environment Protection Licence 3397.

Wind conditions during the monitoring were below the 3 metres per second threshold for valid compliance monitoring in accordance with the Development Consent. Calm conditions were present through to approximately 9am. Light 1 to 2 metre per second winds after 9am transitioned from northwesterly to easterly directions by 12pm.

For certain locations/measurements, extraneous noise influences included:

- Bird calls – significant influence for many of the measurements but able to be substantially but not completely filtered out through post-processing using audio recordings
- Insect (cicada) noise – significant influence to several later measurements but filtered to the extent possible through post-processing of frequency analysis data

- Public road traffic noise - filtered out through on-site data exclusion where practical however background noise from Casino-Coraki Road and Lagoon was relatively consistent during a limited number of measurements

Coraki Quarry operations during the noise monitoring period were as follows:

- Main crushing and screening plant
- Loading dump trucks by excavator and haulage from pit to plant
- Stockpile management
- Loading and dispatch of product (road) trucks – consistent trucks throughout the monitoring period

No rock drill was operating on 11 December 2018.

Noise monitoring was undertaken over generally 10 to 15 minute periods at free-field locations within 30 metres of the following six (6) residential dwellings nearest to the Coraki Quarry (refer **Figure 1**):

- R1
- R2
- R3
- R4
- R6
- R7

Noise monitoring was undertaken using a Bruel & Kjaer Type 2250 frequency analysing sound level meter. The sound level meter was calibrated to a reference signal of 94 dB at 1kHz prior to the monitoring and displayed no variance post-monitoring.

Condition 4 of the Development Consent Schedule 3 prescribes a 35 dB(A)  $L_{Aeq,15min}$  noise limit for privately owned residences unless formal written agreements are in place with landowners.

As allowed for by Development Consent Schedule 3 Condition 4 and EPL Condition L4.2, formal written agreements are in place with the following landowners to the effect that the land owners do not hold objections to the operation of the Coraki Quarry exceeding the noise emission criterion by up to 5 dB(A):

- R1: 200 Lagoon Road, Coraki
- R2: 95 Spring Hill Road, Coraki
- R3: 75 Spring Hill Road, Coraki
- R6: 1905 Casino-Coraki Road, Coraki
- R7: 140 Newmans Road, Coraki

A summary of the 11 December 2018 compliance noise monitoring is provided in **Attachment 1**.

**The Coraki Quarry was assessed to be compliant with the Development Consent and Environment Protection Licence No. 3397 noise limits during the 11 December 2018 noise monitoring period.**

A potential minor exceedance of less than 1 dB(A) was assessed for a single measurement during the period of heavy fog that was considered may not have represented valid meteorological conditions for the assessment of compliance with the noise limit specified in the Development Consent and Environment Protection Licence 3397. A later measurement at the same location when the thick fog had lifted assessed compliance with the noise limit.

Further noise compliance monitoring is required by 31 March 2018 in accordance with Condition 5(c) of the Development Consent Schedule 3.

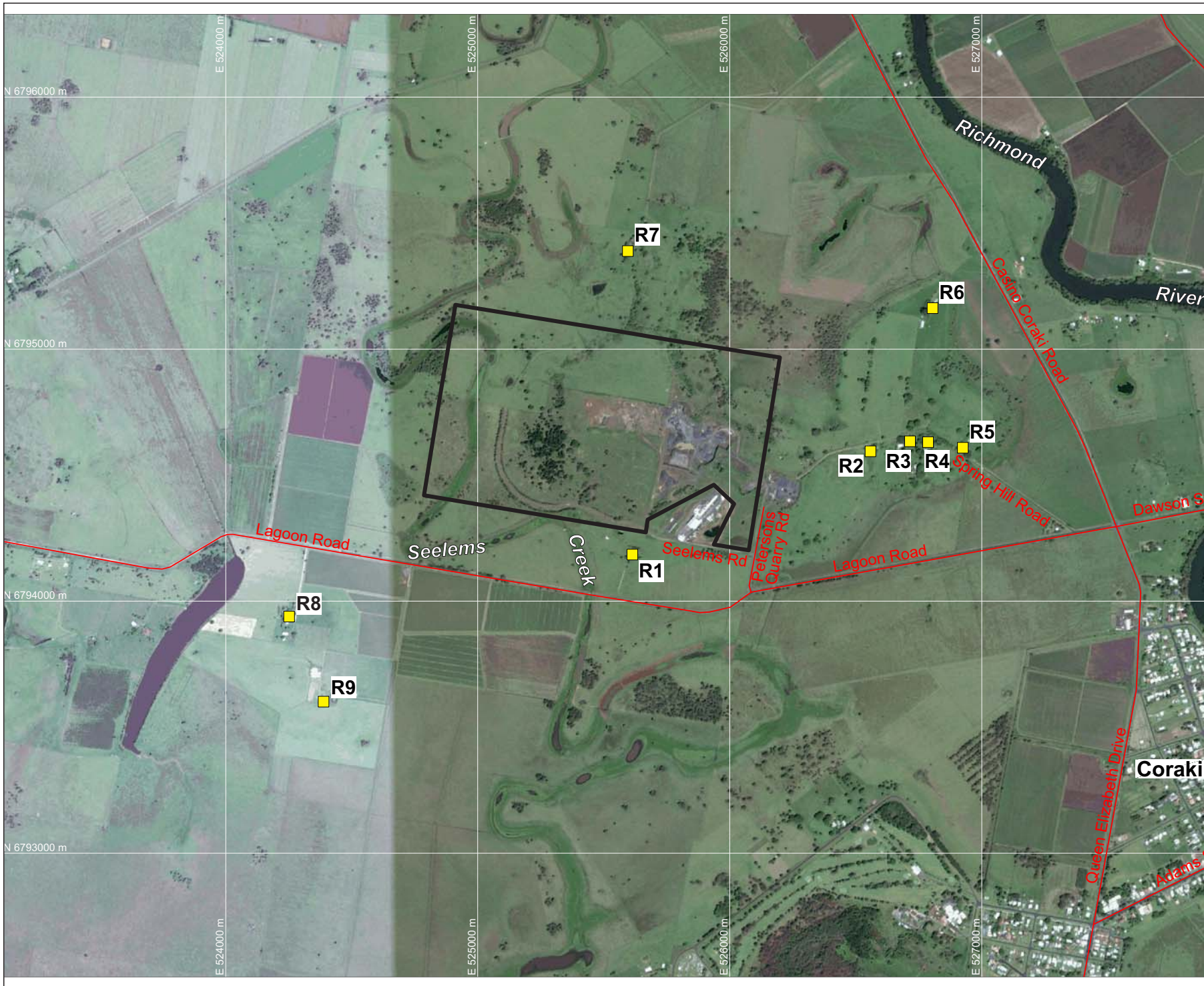
If you require any clarification or additional information please contact the undersigned.

Yours sincerely



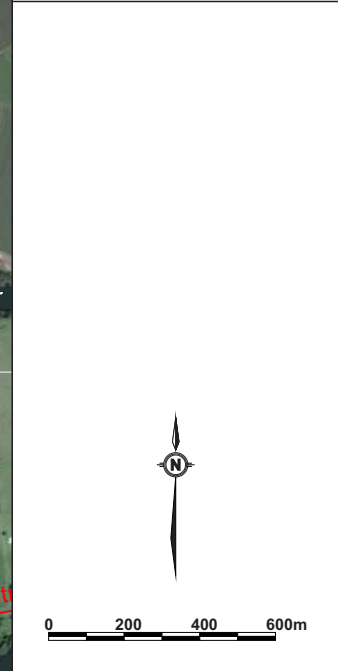
Ben Hyde  
Environmental Engineer

## FIGURES



**LEGEND**  
 — SITE BOUNDARY  
 ■ R9 SURROUNDING RESIDENCES (R1-R9)

**DRAWING REFERENCE**  
 GROUNDWATER PLUS SITE LOCATION PLAN  
 1837.DRG.002, 13/04/15.



CLIENT  
**QUARRY SOLUTIONS PTY LTD**

PROJECT  
**CORAKI  
 NOISE COMPLIANCE  
 ASSESSMENT  
 CORAKI QUARRY**  
 Petersons Quarry Rd Coraki NSW

TITLE  
**AERIAL PHOTOGRAPH  
 SHOWING SURROUNDING  
 RESIDENCES**

JOB	CORAKI	<b>FIGURE 1</b>
JOB NO.	15-041	
DATE	16/12/16	DRAWING NUMBER
SCALE	1:20,000 (A4)	<b>15-041-1</b>
REV.		



Max Winders & Associates Pty Ltd tas MWA Environmental  
 Level 15, 241 Adelaide St, Brisbane, GPO BOX 3137, Brisbane Qld 4001  
 P 07 3002 5500 F 07 3002 5588 E mail@mwaenviro.com.au  
 W www.mwaenviro.com.au  
 ABN 94 010 833 084

# **ATTACHMENT 1**

*Summary of Compliance Noise Monitoring*

11/12/2018

MONITORING LOCATION	TIME	METEOROLOGICAL CONDITIONS		ASSESSED QUARRY NOISE Leq - dB(A)	OPERATIONS	NOISE LIMIT LAeq dB(A)	STATUS	NOTES
R1	850	Calm	Still fog but lifting	<33	Normal Operations, no rock drill	40	Compliant	Birds and some cicadas, processing plant barely audible <32dBA, occasional truck exhaust <37 dBA
R1	1130	2m/s E		<35	Normal Operations, no rock drill	40	Compliant	Cicadas significant, Lagoon Rd traffic, occasional truck exhaust just audible, processing plant not audible, quarry probably <35dB(A)
R2	750	Calm	96% Rel Humidity, heavy fog	<41	Normal Operations, no rock drill	40	Possible minor non-compliance (potential meteorological exemption)	Processing plant background noise, birds and insects (distant), plant low 40s when less birds etc.
R2	1040	1m/s NNW		<36	Normal Operations, no rock drill	40	Compliant	Quarry just audible, processing plant approx. 35dBA when less extraneous noise, insects and birds, occasional truck exhaust and tip noise audible
R3	810	Calm	Still fog but lifting	<39	Normal Operations, no rock drill	40	Compliant	Processing plant background noise, occasional reversing beeper just audible, birds, traffic on roads
R3	1055	1m/s NE => 2m/s ENE		<36	Normal Operations, no rock drill	40	Compliant	Cicadas significant, Lagoon Rd and Casino-Coraki Rd traffic, occasional reversing beeper just audible, quarry generally inaudible and compliant
R4	730	Calm	96% Rel Humidity, heavy fog	<35	Normal Operations, no rock drill	35	Compliant	Birds, cows (near-field), distant and Lagoon Rd traffic, processing plant audible but quiet, quarry <35dBA including occasional engine noise audible
R4	1025	1m/s WNW		<31	Normal Operations, no rock drill	35	Compliant	Consistent Casino-Coarki Road and Lagoon Road traffic, some insects initially and significant insects towards end of measurement, quarry inaudible even when background level of 31dBA
R6	1005	1m/s NE		<33	Normal Operations, no rock drill	40	Compliant	Casino-Coarki Road traffic, cows, quarry inaudible aside from occasional reversing beeper and truck exhaust just audible, quarry well below 35dBA
R7	935	1m/s NNW		<35	Normal Operations, no rock drill	40	Compliant	Birds (significant), Casino Coraki Road traffic, processing plant barely audible, occasional truck exhaust and rock tip just audible, quarry <35dBA
R7	700	Calm	96% Rel Humidity, heavy fog	<32	Normal Operations, no rock drill	40	Compliant	Heavy fog, birds, cows and distant traffic, quarry inaudible aside from occasional exhaust and rock tip but within background noise levels, quarry <32dBA when less extraneous noise