



Ref: L26117/BH/15-041

5 July 2017

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

Attention: Mr Jim Lawler

Dear Jim

Re: June 2017 Noise Compliance Monitoring – Coraki Quarry, Coraki

MWA Environmental conducted noise compliance monitoring for the Coraki Quarry in June 2017 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 between the previous March 2017 noise monitoring and the June 2017 noise monitoring events.

Noise monitoring was undertaken between 7:30am and 2:00pm on 28 June 2017.

Weather conditions during the monitoring were fine with heavy early fog but no rainfall and wind speeds of less than 3 metres per second, predominantly from northwesterly directions.

There was no notable insect noise influence during the noise monitoring period however, for certain locations/measurements, extraneous noise influences included:

- Bird calls – able to be relatively well filtered out through post-processing using audio recordings for most measurements but measurements were not viable at times due to overriding bird noise
- Distant frog noise from water covered floodplain – evident as background noise during several measurements – unable to be filtered out
- Public road traffic noise - filtered out through on-site data exclusion where practical but background noise from Casino-Coraki Road north of Lagoon Road was relatively consistent during some measurements

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

- Crushing and screening – aside from a plant breakdown between 9:30am and 11:50am during which time only one noise measurement was conducted
- Loading dump trucks by excavator and haulage from pit to plant
- Stockpile management
- Loading and dispatch of product (road) trucks – consistent and frequent trucks throughout the monitoring period
- Rock drill operating from 8:30am

Noise monitoring was undertaken over minimum 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

Attended noise monitoring was undertaken using a Bruel & Kjaer Type 2250 frequency analysing sound level meter with current NATA calibration. 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 28 June 2017 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 28 June 2017 noise monitoring period with the exception of one measurement at 7:50am at residence R2 when a heavy fog was present. The thick fog conditions prevailing during the 7:50am measurement period are indicative of a strong temperature inversion.

Two further noise measurements at residence R2 on 28 June 2017 under valid meteorological conditions were assessed as compliant with the Development Consent and Environment Protection Licence No. 3397 noise limits. Development Consent Appendix 4 and EPL Condition L4.2 both note that the noise limits do not apply under strong temperature inversion conditions.

It is further noted that an assessment of the significance of temperature inversion conditions at the locality was undertaken for the development assessment phase of the Coraki Quarry project¹ in accordance with the NSW Industrial Noise Policy and concluded as follows:

“On the basis of the objective meteorological analysis in accordance with the NSW Industrial Noise Policy, temperature inversions and winds of up to 3 m/s from source to the nearest receivers are not assessed to be significant conditions for the purposes of this noise assessment.”

On this basis, the Coraki Quarry was assessed to be compliant with the Development Consent and Environment Protection Licence No. 3397 noise limits during the 28 June 2017 noise monitoring period for all measurements during valid meteorological conditions.

Further noise compliance monitoring is required by 30 September 2017 in accordance with Condition 5(c) of the Development Consent Schedule 3.

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

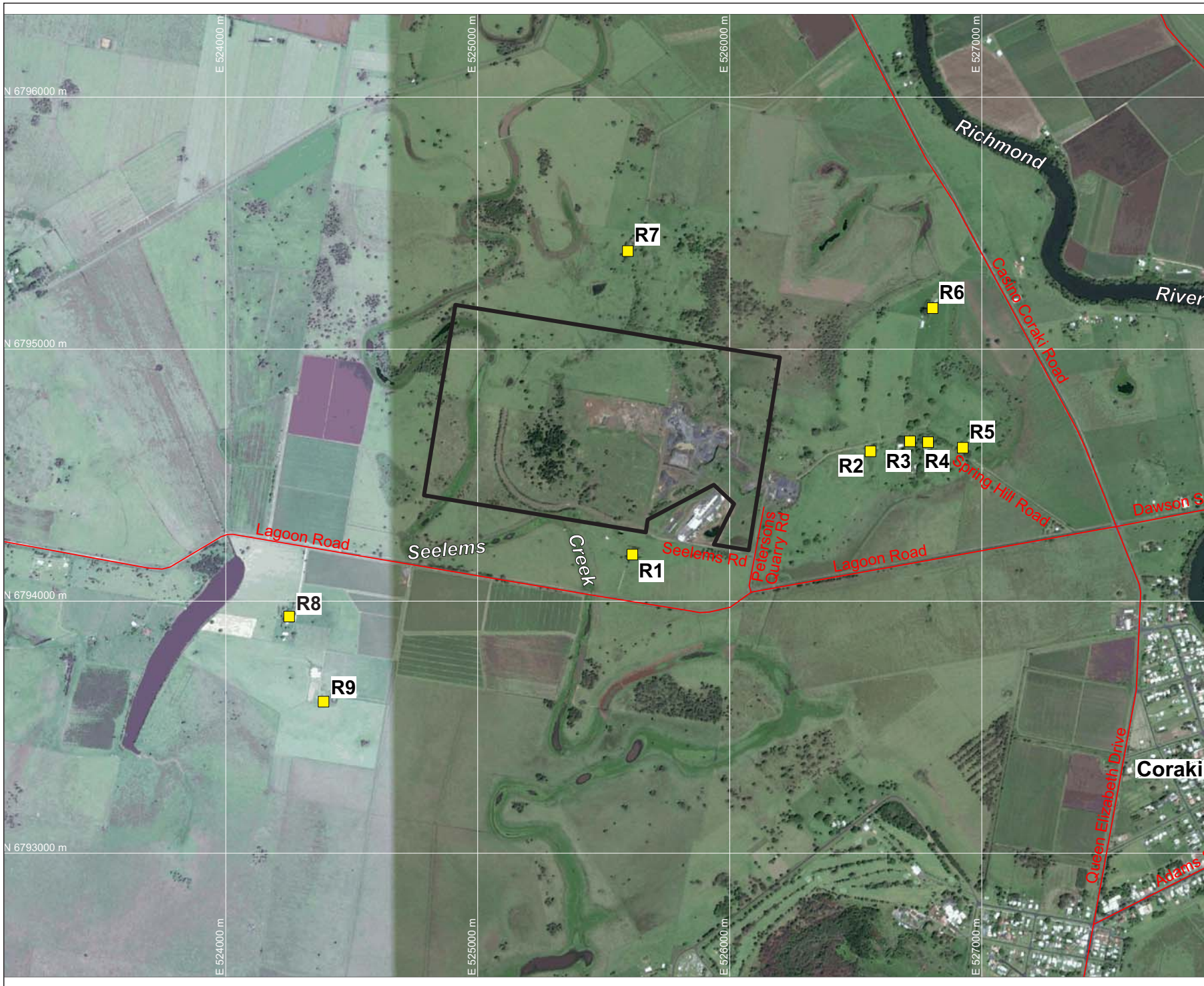
Yours sincerely



Ben Hyde
Environmental Engineer

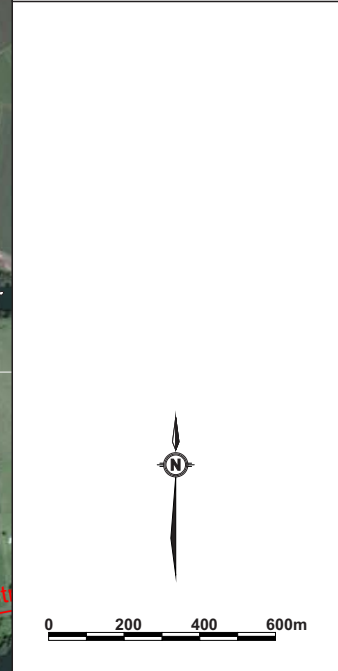
¹ *Noise and Dust Assessment – Proposed Coraki Quarry – Seelems Road, Coraki (MWA Environmental, 4 November 2015)*

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

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ATTACHMENT 1

Summary of Compliance Noise Monitoring

MONITORING LOCATION	TIME	WIND	OVERALL MEASURED Leq INCLUDING EXTRANEIOUS UNABLE TO BE FILTERED- dB(A)	ASSESSED QUARRY COMPONENT NOISE Leq - dB(A)	OPERATIONS	NOISE LIMIT LAeq dB(A)	COMPLIANCE STATUS	MONITORING NOTES
R1	930	0.9m/s W	36.7	<35	Crushing plant, rock drill, load and haul, product sales	40	Compliant	birds, trucks on public road, crushing plant just audible <35 dBA when less extraneous noise, occasional dump to tip head noise audible
	1320	0.9m/s NE => 0.9m/s NNE	37	<35	Crushing plant, rock drill, load and haul, product sales	40	Compliant	residents talking loudly, processing plant just audible and occasional tip to tip head, alarm at quarry for a few minutes, processing plant <33dBA
R2	750	1.3m/s NW + thick fog	48.1	>42 but <45	Crushing plant, load and haul, product sales	40	Not valid meteorological conditions	Thick fog (strong inversion conditions), frogs in floodplain, birds, distant traffic, crushing plant main quarry noise low-mid 40s when less extraneous, some reversing beeper noise audible.
	1030	0.4m/s SW	40.5	<36	Rock drill, load and haul, product sales	40	Compliant	No crushing plant, significant bird noise in trees towards R3, drill and excavator just audible but not measureable above birds etc, occasional truck exhaust approx. 38 dBA, drill <34dBA
	1150	1.3m/s WNW => 0.9m/s N	42.8	<40	Crushing plant, rock drill, load and haul, product sales	40	Compliant	birds significant + cows + frogs, processing plant audible, processing plant + frogs approx. 39-40 dB(A) when less crows and up to 42 dBA for short period
R3	810	1.3m/s NW + thick fog			Crushing plant, load and haul, product sales		Not valid meteorological conditions	Overriding bird noise too significant
	1215	0.9m/s W => 1.3m/s WNW	41.5	<39	Crushing plant, rock drill, load and haul, product sales	40	Compliant	birds, trucks on road, processing plant 39dBA when less bird noise
R4	815	1.3m/s NW + thick fog			Crushing plant, load and haul, product sales	35	Compliant but not valid meteorological conditions	Overriding bird noise, quarry just audible but observed levels were below 35dBA for short periods with less bird noise
	1230	1.3m/s NW	32.9	<32	Crushing plant, rock drill, load and haul, product sales	35	Compliant	frogs, road traffic paused to extent feasible, Overall LAeq <33 when no traffic noise and less frog noise, quarry generally inaudible aside from occasional tip to tip head at <33dBA
R6	850	0.4m/s W => 0.9m/s WNW	43.2	<37	Crushing plant, rock drill, load and haul, product sales	40	Compliant	Birds, significant amount of distant traffic on Casino-Coraki Rd, crushing plant dominant quarry noise and <37 dBA when less traffic and bird noise, occasional dump to tip head audible
	1250	1.3m/s NW			Crushing plant, rock drill, load and haul, product sales	40	Compliant	Quarry generally inaudible aside from occasional tip to tip head and below noise level of harvester operating continuously in cane to east of Casino-Coraki Rd. Quarry level not measureable due to low noise component from the activity and extraneous noise from cane harvesting.
R7	820	1.3m/s WNW	36.2	<33	Crushing plant, load and haul, product sales	40	Compliant	Birds & cows, significant amount of distant traffic on Casino-Coraki Rd, frogs in floodplain as background when less traffic noise, quarry inaudible (<33dBA) when less extraneous noise aside from one just audible tip at tip head.
	1345	0.4m/s SE => 0.9m/s NE	32.7	<32	Crushing plant, rock drill, load and haul, product sales	40	Compliant	frogs at floodplain + birds + constant traffic + harvesting to east, quarry processing plant inaudible when background Leq <30dBA, occasional tip to tip head just audible.