



Ref: L37919/BH/15-041

13 December 2019

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

Attention: Mr Jim Lawler

Dear Jim

Re: December 2019 Noise Compliance Monitoring – Coraki Quarry, Coraki

MWA Environmental conducted noise compliance monitoring for the Coraki Quarry in December 2019 in accordance with Condition 5(c) of the Development Consent Schedule 3.

Noise monitoring was undertaken between 7:00am and 11:00am on 4 December 2019.

Quarry Solutions Pty Ltd has advised that no noise complaints have been received in relation to the Coraki Quarry since the previous September 2019 noise monitoring event.

Weather conditions during the monitoring period were fine with light winds predominantly from westerly directions. With the exception of a single measurement when wind speeds were slightly elevated, the wind conditions during the monitoring were assessed to be below the 3 metres per second threshold for valid compliance monitoring in accordance with the Development Consent. For the affected measurement, the 3.6 metre per second wind speed was not assessed to significantly affect the monitoring result.

For certain locations/measurements, extraneous noise influences included:

- Bird calls – generally able to be substantially but not completely filtered out through post-processing using audio recordings
- Public road traffic noise - filtered out through on-site data exclusion where practical however background noise from Casino-Coraki Road and Lagoon was dominant and relatively consistent during a number of measurements

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

- Main crushing and screening plant
- Excavator sorting and loading material at an elevated bench
- Loading dump trucks by excavator and haulage from pit to plant
- Stockpile management
- Loading and dispatch of product (road) trucks
- Rock drilling at elevated bench

Noise monitoring was undertaken over generally 10 to 15 minute periods at free-field locations within 30 metres of the following four (4) residential dwellings nearest to the Coraki Quarry (refer **Figure 1**):

- R1
- 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
- R6: 1905 Casino-Coraki Road, Coraki
- R7: 140 Newmans Road, Coraki

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:

- R2: 95 Spring Hill Road, Coraki
- R3: 75 Spring Hill Road, Coraki

On the basis of the agreements in place with the owners of 95 Spring Hill Road and 75 Spring Hill Road there was no requirement for assessment of compliance with the noise limits at R2 and R3.

A summary of the 4 December 2019 compliance noise monitoring is provided in **Attachment 1**.

During the 4 December 2019 noise monitoring period the Coraki Quarry was assessed to be compliant with the Development Consent and Environment Protection Licence No. 3397 noise limits.

Further noise compliance monitoring is required by 31 March 2019 in accordance with Condition 5(c) of the Development Consent Schedule 3.

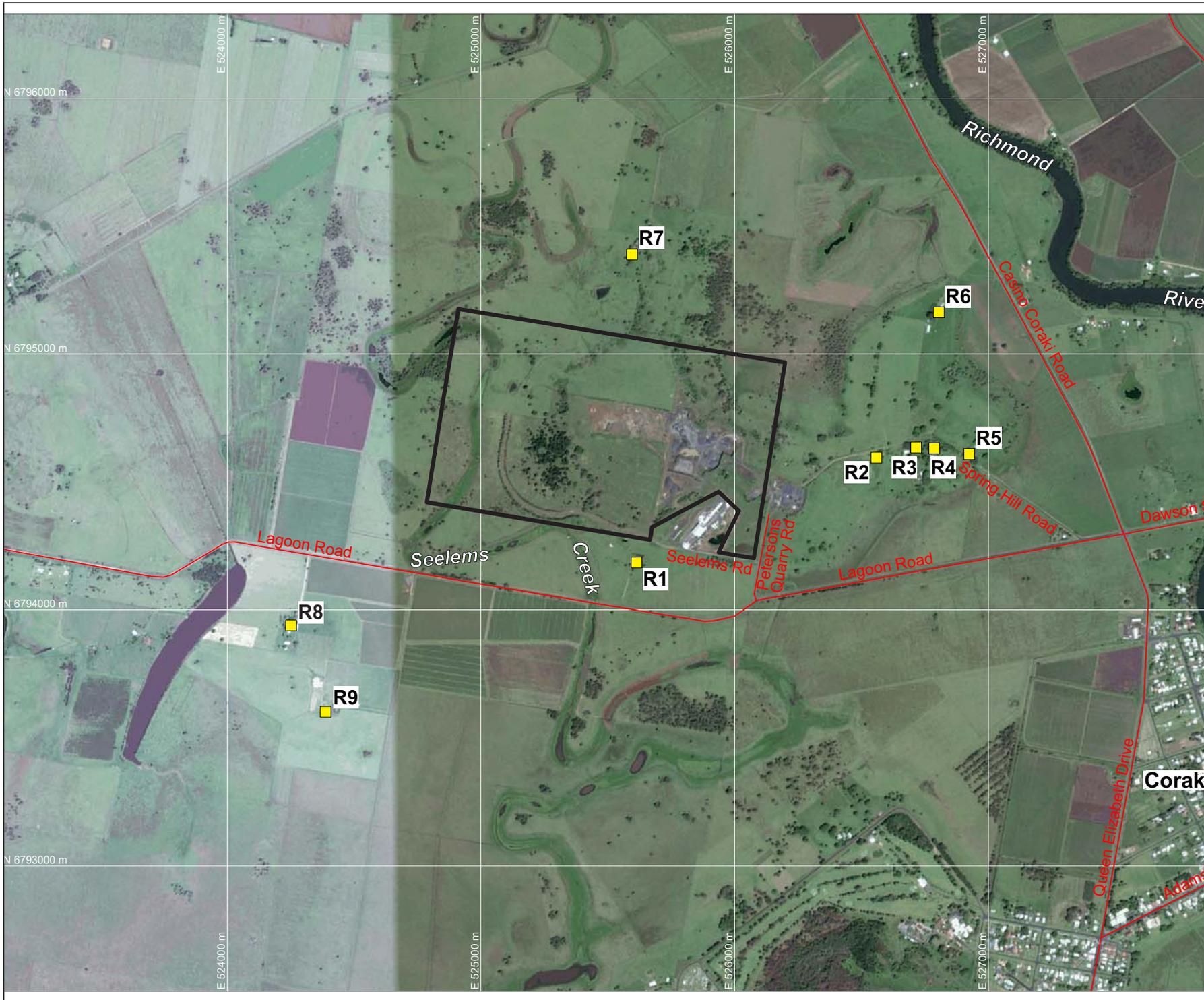
If you require any clarification or additional information please contact the undersigned.

Yours sincerely



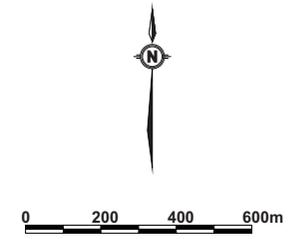
Ben Hyde
Environmental Engineer

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 | 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

4/12/2019

| MONITORING LOCATION | TIME | WIND | ASSESSED QUARRY NOISE Leq - dB(A) | OPERATIONS | NOISE LIMIT LAeq dB(A) | STATUS | NOTES |
|---------------------|------|-------------------------|-----------------------------------|--------------------------------------|------------------------|-----------|--|
| R1 | 735 | 1.3m/s WNW to 1.3m/s NW | <35dBA | Normal Operations including drilling | 40 | Compliant | Casino-Coraki Road and Lagoon Road traffic, birds, processing plant inaudible, FEL at top stockpiles and occasional dump truck <37dBA, overall quarry noise <35dBA |
| R1 | 930 | 2.7m/s SW | <34dBA | Normal Operations including drilling | 40 | Compliant | Distant road noise, some wind/tree noise during gusts, FEL and truck engines audibles at times at top stockpile area |
| R4 | 835 | 2.2m/s NW | <34dBA | Normal Operations including drilling | 35 | Compliant | Casino-Coraki Road and Lagoon Rd traffic, birds, quarry inaudible when background <35dBA aside from a couple of tip rumbles but measureable above bird noise |
| R4 | 1020 | 1.3m/s WSW | <34dBA | Normal Operations including drilling | 35 | Compliant | Casino-Coraki Road and Lagoon Rd traffic, fly, quarry inaudible aside from occasional rock tip <35dBA, dog, plane paused |
| R6 | 955 | 2.2m/s SSE | <37dBA | Normal Operations including drilling | 40 | Compliant | Casino-Coraki Road traffic, processing plant including jaw rumble audible at 36-38dBA at times, several rock tip peaks, plane paused |
| R6 | 815 | 2.2m/s NW | <38dBA | Normal Operations including drilling | 40 | Compliant | Significant Casino-Coraki Road traffic, cows, dump truck engines and processing plant just audible when CC Rd <38dBA |
| R7 | 700 | 2.7m/s WNW | <35dBA | Normal Operations including drilling | 40 | Compliant | Casino-Coraki Road traffic, birds, cows, occasional dump truck at quarry just audible but not measureable over the Casino-Coraki Road traffic noise <37dB(A) |
| R7 | 905 | 3.6m/s SW | <33dBA | Normal Operations including drilling | 40 | Compliant | Casino-Coraki Road traffic, birds, resident singing at house, processing plant and engines occasionally audible when background <33dBA |