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28th February 2017

The Secretary
NSW Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001
ATTENTION: LAUREN EVANS

Dear Lauren,

**Re: CLEARY BROS. ALBION PARK QUARRY – STAGES 5 & 6 MODIFICATION
LEC CONSENT NO. 10639 OF 2005 MOD 3
FURTHER RESPONSE TO MATTERS RAISED IN UPDATED SUBMISSIONS**

We refer to the NSW Department of Planning & Environment (DPE) email correspondence dated 13th January 2017, requesting some additional information to be provided in order to finalise assessment. In regards to the points of query, we provide the following comments in association with the proponent:-

- Please find attached the updated Noise Level Contour Plan included which forms *Appendix C* of the Noise and Blasting Assessment.
- To clarify blasting setbacks described in the Response to Submissions (RTS):
 - No explosive blasting will be undertaken within a 20 metre buffer zone of the property boundary with Figtree Hill in Stages 5 or 6 of the development.
 - Explosive blasting will be undertaken at distances greater than 20 metres from the property boundary with Figtree Hill, on the provision that the health and safety of persons and stock are not compromised.
 - However, the current site laws (which as described below are continuously refined as additional monitoring data is obtained) restrict



any productive explosive blasting closer than approximately 50 metres of the property boundary.

- Further, near-field monitoring of air blast overpressure for future blasts will provide additional data that will allow improved resolution and accuracy of the site laws, which may increase or decrease the required minimum distance from the property boundary with Figtree Hill.
- Irrespective of any modifications to the site laws described above, no explosive blasting will be undertaken at a distance of less than 20 metres from the property boundary of Figtree Hill in Stage 5 or 6 of the development.
- Notwithstanding the above, non-explosive rock fracturing or other methods may be utilised to allow efficient and safe recovery of the hard rock resource up to the mapped buffers as per the approved survey plan (refer *Figure 2.2* of current *QEMP*) (which is available on their web page).

Further to the above, we refer to the supplementary submissions provided by NSW EPA (19th January 2017), DPI (16th January 2017) and OEH (16th January 2017) in regards to our initial RTS, and note the following in conjunction with the proponent:-

EPA

The proponent notes the correspondence received from the Environmental Protection Agency (EPA) on 19th January 2017. The proponent notes the comment from the EPA stating that, in general, the Cleary Bros' Response to Submissions report (dated 23rd December 2016) adequately addresses the matters raised by the EPA in their initial submission. As proposed by the EPA, the proponent would welcome the opportunity to meet with the EPA and DPE in order to review the draft conditions of the modified Development Consent.

DPI

In accordance with our previous submission, groundwater interception in the earlier stages of the quarry development has been minimal, with the massive basalt structure containing little free water. Quarrying is restricted to this hard rock resource overlying the porous sandstone aquifer. Water levels recorded in the



groundwater monitoring bores, combined with the observable minimal accumulation of water in the Quarry Extension sump outside of rainfall events, suggest that there has been negligible interception of groundwater by the Quarry Extension to date.

Water is discharged from this sump in the quarry pit (as required) to the creek located to the south in accordance with *Environmental Protection Licence 299*, or to assist in watering of the revegetation and rehabilitation areas. The levels in the two groundwater bores that are located outside the extraction area are tested biannually and are included in the proponent's Annual Review (which is available on their web page).

Water is not currently taken for other operational uses as the main storage pond located to the north-west of the quarry extension currently has sufficient capacity. Should this change in the future, the proponent will seek to apply for any necessary approvals under the *Water Management Act 2000*.

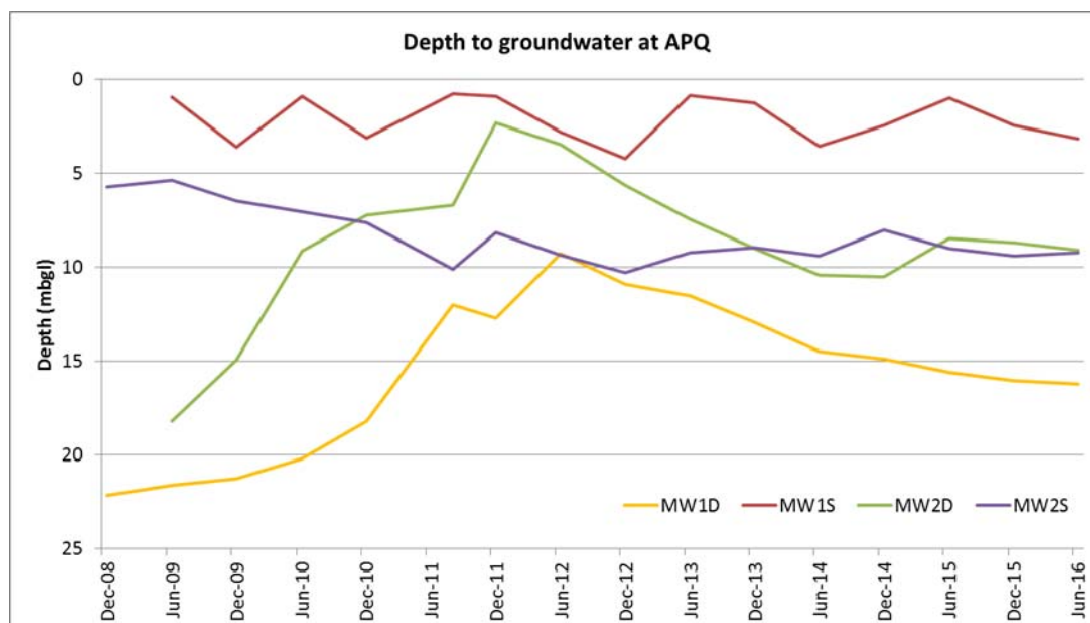
For further clarification with respect to groundwater disposal, the Quarry Environmental Management Plan (QEMP, which formed part of the EA submission) describes the methods of removing surplus water (including surface runoff and any groundwater that may be intercepted) from the Quarry Extension. The QEMP states "When collected water is available, water is to be periodically released from the quarry to the creek system to mirror natural pre-quarry flows". It also states: "Collected water is to be reinjected to groundwater should monitoring show that groundwater levels are declining as a result of quarrying" (emphasis added).

Monitoring conducted thus far confirms that both the shallow and deep aquifer systems have shown no observable impacts due to quarrying operations in the Quarry Extension. Shallow monitoring bores show a highly variable trend, which can be attributed solely to rainfall anomalies, while the deeper groundwater bores have shown far greater historical variations, with recent results well within the historical range (see below graph). It should also be noted that anecdotal evidence provided by the Quarry Production Manager confirms negligible inflow to the Quarry Extension sump outside of significant rainfall events. For this reason, the removal of water to date has been through the surface water release into the creek system only.



In the event that monitoring shows a quarry-related decline in groundwater levels in the aquifers, then water will be re-injected as described above to supplement the local groundwater systems.

In the original Response to Submissions for Modification 3 (dated 22nd December 2016), the Proponent committed to examining current stormwater discharge practices as part of the review of the Water Management Plan. The proponent will take into consideration any feedback provided by the DPI Water as part of this review.



OEH

The area of the proposed activation for Stages 5 and 6 have been the subject of two investigations of Aboriginal archaeology previously, being:

- Robert Paton Archaeological Studies Pty Ltd (1998), and
- Mary Dallas Consulting Archaeologists (2001)

In addition to this, Cleary Bros have commissioned heritage consultants Biosis to carry out a further detailed desktop assessment that included a review of any findings of any archaeological studies carried out in the surrounding area since 2001.



A copy of Biosis' report (dated 21 February 2017) is attached for the Department's consideration. In summary, the assessment concluded that – *"No further archaeological work is required in the study area due to the entire study area that has been assessed with both a detailed desktop assessment and two previous field assessments in 2000 and 2001 that all assessed the area as having low archaeological potential."*

We trust this further supplementary advice (and associated email attachments) satisfactorily addresses the additional Agency submissions and our discussions to date and, should you wish to discuss any matters further and/or require any additional information, please contact me on (02) 4229 5555.

Yours faithfully,

MARTIN MORRIS & JONES PTY LTD

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