15 August 2014

Denis Male
NSW Quarry Services Pty Ltd
PO Box 4007
DENISTONE EAST NSW 2112

Our ref: 22/17047
Your ref: 16149

Dear Denis

Church Hill Quarry
Road Safety Audit Response

Austroads Guide to Road Safety, Part 6: Road Safety Audit, 2009, provides definitions for four different levels of risk, namely, “intolerable”, “high”, “medium” or “low”. Extracts of the risk assessment matrix from Austroads are provided below in Table 1.

Table 1 Summary of Level of Risk Frequency

Severity / Frequency	Frequent	Probable	Occasional	Improbable
Catastrophic	Intolerable	Intolerable	Intolerable	High
Serious	Intolerable	Intolerable	High	Medium
Minor	Intolerable	High	Medium	Low
Limited	High	Medium	Low	Low

As noted in the road safety audit report, a consequence of basing the risk ratings on the Austroads guide and not adopting a more objective risk ratings process, results in risk rating being subjective and can result in audit findings being skewed towards reporting risks as “high” and “intolerable”. The comments in the ‘Relevance to Quarry Proposal’ column in the following table acknowledge the subjectivity of the audit risk ratings.

Table 1 Audit Review Commentary

Audit Report Reference for Finding	Audit Recommendations	Reported level of risk	Relevance to quarry proposal
Section 4.1 Intersection Pavement	Rehabilitate and seal the intersection’s pavement, including the creation of additional parallel pavement and shoulder tapers on the northern side of the intersection	Medium	The traffic report and supporting letter note the requirement for a CHR(S) type intersection treatment. Sealing the northern gravel shoulder as part of the CHR(S) is supported for safety reasons.

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Audit Report Reference for Finding	Audit Recommendations	Reported level of risk	Relevance to quarry proposal
Section 4.2 Sight distance	Improve sight distance by the removal of the tree in the south eastern verge which is limiting sight	High	The removal of the tree is recommended in the traffic report.
Section 4.3 Delineation	Linemarking be addressed including associated RRPMs. Linemarking to be address includes the BB centre line, eastern northern side of the intersection E1 edge lines, TB giveway line for the Quarry Access Road. Guidepost post should be installed to define the roadway, intersections and driveways	High	Intersection linemarking required for the CHR(S) and BAL (south to west) improvements. Edge lines, give way line and guideposts to be installed at the intersection. Delineation beyond the intersection is considered to be a maintenance issue to be addressed in Council's programme.
Section 4.4 Signage	Install additional signage including • Intersection warning signs on both approaches (W2-4) • Trucks (crossing or entering) warning signs on both approaches (W5-22) • Giveway sign in the south verge (R1-2) • UHM sign in the northern verge opposite the intersection (D4-2-1) • Church Hill Quarry sign (custom)	High	Install signs related to intersection

The RSA has identified a number of safety issues at the quarry access. Some of the findings relate to maintenance and require attention by Council.

The main safety issues at the quarry access intersection were raised in the TIA and its recommendations address the issues raised in the RSA. Delineation and signage at the intersection would form part of the improvements to achieve the required CHR(S) and BAL treatments.

Yours Sincerely
GHD Pty Ltd

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Mick Lyons

Principal Transport Engineer