

# PEARU TERTS

BA, Grad. Dip. Env. Stud. (Hons.), MIE Aust., CPENG, MAAS  
Consulting Engineer

33 Falcon Rd  
Claremont 7011  
Tasmania AUSTRALIA

ARCHITECTURAL ACOUSTICS  
NOISE CONTROL

Phone 03 6249 7165

Email [pearuterts@gmail.com](mailto:pearuterts@gmail.com)

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Dr. Richard Barnes

e-mail: [rwbarnes73@gmail.com](mailto:rwbarnes73@gmail.com)

cc. [REDACTED]

Crusher & Screen Noise  
Williams Quarry,  
Supplement to the EER

Dear Dr. Barnes,

The combined sound power of the crusher (112 dB(A)) and the screen (109.4 dB(A)) is determined as follows:

$$SWL = 10 \log[10^{11.2} + 10^{10.94}] = 113.9 \text{ dB(A)} \text{ or say } 114 \text{ dB(A)}.$$

This level is below the 118 dB(A) sound power level designated for the quarry operation.

The proposed spur road route to the quarry is shorter than the original track. I asked Mr Williams to determine the travel time {answers in the brackets} for :

- A) the original route and to include in the timing the opening and shutting of the farm gates,  
{Ans. To the quarry, 192 seconds and from the quarry 205 seconds.}
- B) the original route but with farm gates left open and,  
{Ans. Either direction, 130 seconds.}
- C) the travel on the spur road.  
{Ans. To the quarry 78 seconds, from the quarry 80 seconds.}

The above travel times were obtained with the truck travelling at 20 kph which is the normal travel speed on the farm.

The test shows the considerable decrease in travel time ( 205 – 80 = 125 seconds) on the spur road, which together with the lower gradient and fewer gear changes due to stopping for gate openings and closures, results in lesser noise.

Yours sincerely,

Pearu Terts