

**From:** [Jonathon Clarke](#)  
**To:** [REDACTED]  
**Subject:** RE: Premium: Kings Quarry Fast Track (Stages 2 & 3) - Substantive Application complete  
**Date:** Monday, 16 June 2025 3:57:41 pm  
**Attachments:** [REDACTED]

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Thanks Andrew for that, pretty clear and straight forward. I don't have any questions here.

Many thanks for your help

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**From:** Andrew Gordon <[Andrew.Gordon@aucklandcouncil.govt.nz](mailto:Andrew.Gordon@aucklandcouncil.govt.nz)>  
**Sent:** Monday, 16 June 2025 12:07 pm  
**To:** [REDACTED]  
[REDACTED]  
**Subject:** RE: Premium: Kings Quarry Fast Track (Stages 2 & 3) - Substantive Application complete

Hi Warwick and Jonathon,

The brief includes;-

**Noise**  
Assessment of acoustic report and confirmation of adverse effects anticipated.  
Comment on proposed mitigation and whether these are suitable to mitigate adverse effects and meets BPO  
Provide comments on draft conditions and whether these are adequate to manage effects  
Comment on whether the proposal meets objectives and policies generally or does not meet specific objectives and/or policies  
PS Andrew Gordon provided comment on acoustics for both the Stage 1 and Covid Fast Track applications

I have reviewed the AEE dated 24 April 2025 by B&A and specifically the Assessment of Noise Effects dated February 2025 by Hegley Acoustic Consultants.

I visited the site and surrounds in March 2021 as part of application BUN60373589 to re-establish quarrying at the site (Stage 1). I have not revisited the site.

This is a Fast Track application to carry out Stage 2 quarrying comprising extraction of approximately 500,000 tonnes of aggregate per year for 45 years.

**I have no request for further information.**

**Figure 3 reproduced**

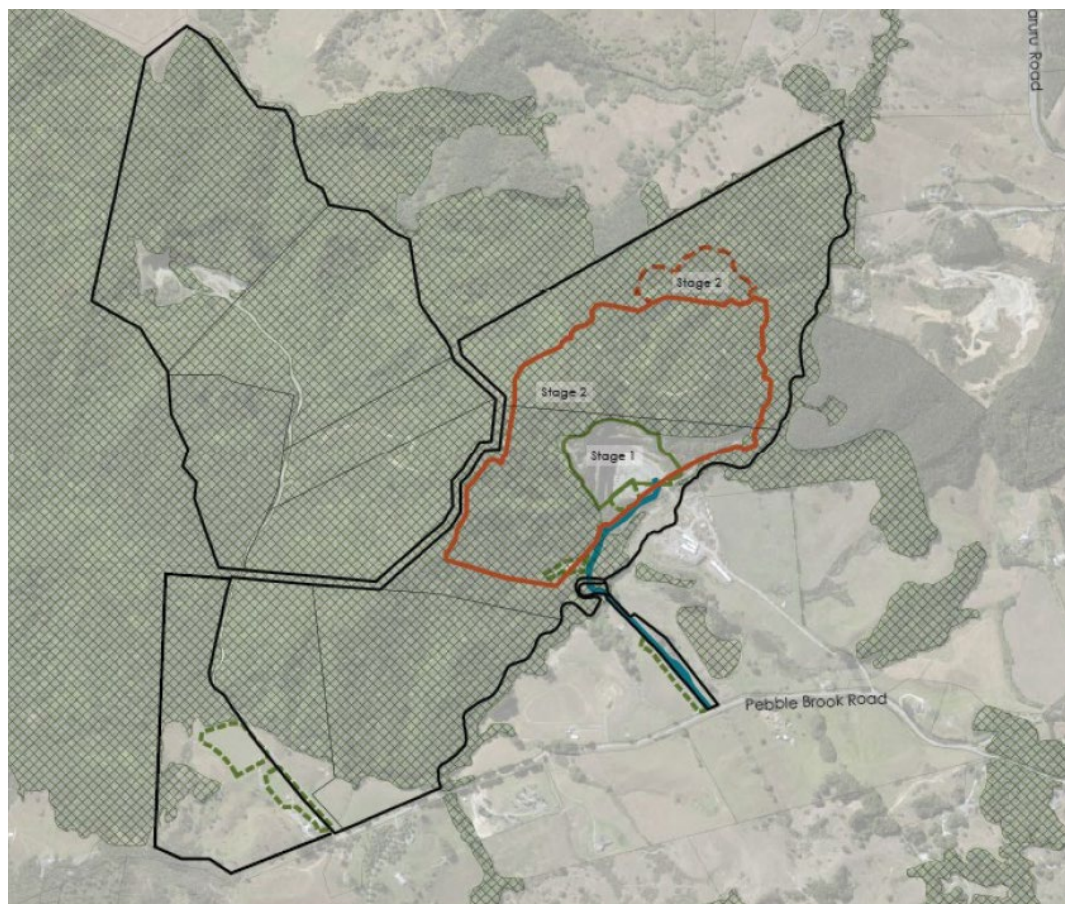
**6 reproduced**

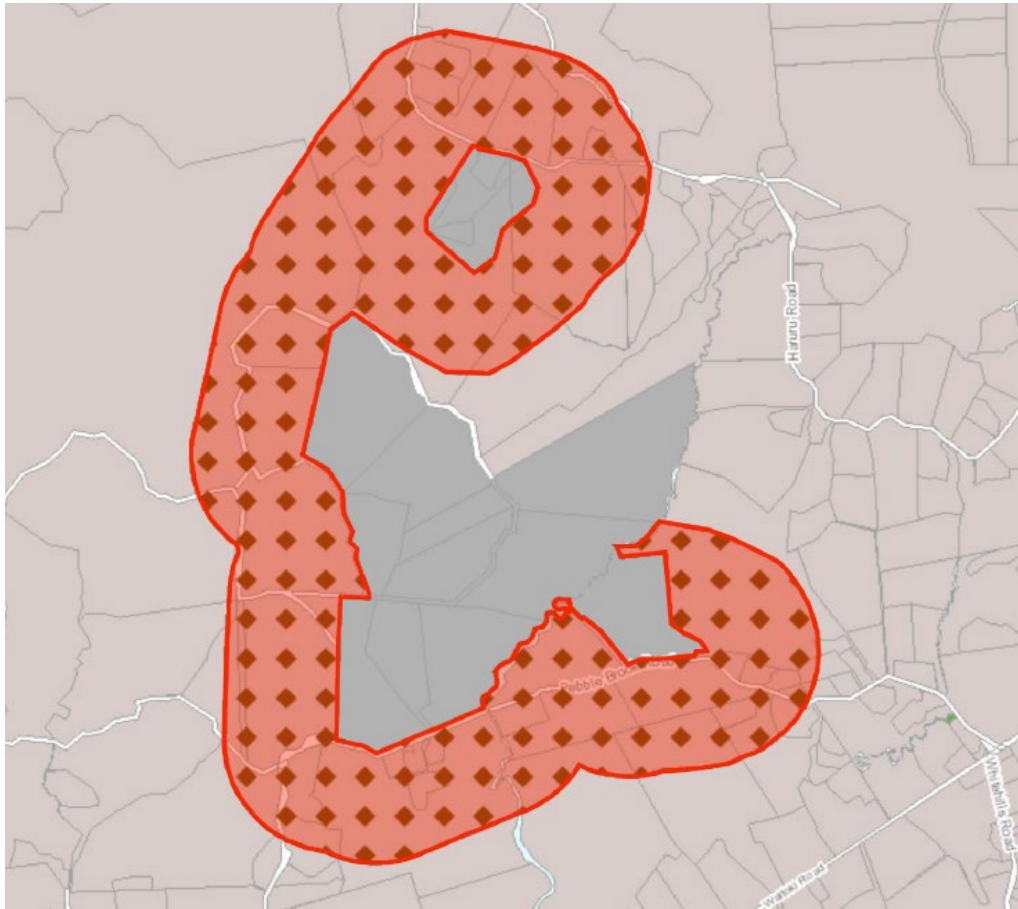
**Stage 2 expansion outlined in red**

**Quarry Buffer Overlay**

**Kings Quarry landholdings outlined in black line hatching**

**Figure**





### **D27 Quarry Buffer Area Overlay**

As shown above, a quarry buffer overlay is located around the majority of surrounding land to avoid reverse sensitivity effects on quarry operations that can result from subdivision and new development occurring in close proximity.

New dwellings within the overlay are a controlled activity and subject to assessment criteria including whether the building design demonstrates sufficient acoustic insulation measures will be adopted to ensure an internal noise environment in habitable rooms that does not exceed 40dB LAeq (15min).

### **H28 Special Purpose – Quarry Zone**

As shown above (grey area), all Stage 2 quarrying (over 54.5ha) will occur within the Special Purpose – Quarry Zone. Surrounding land is zoned Rural – Rural Production.

#### **H28.2. Objectives**

- (2) The significant adverse effects associated with mineral extraction are avoided, remedied or mitigated.

#### **H28.3. Policies**

- (4) Manage noise, vibration, dust and illumination to protect existing adjacent activities sensitive to these effects from unreasonable levels of noise, vibration, dust and illumination.

#### H28.6.2.1. Noise

- (1) Noise from mineral extraction activities must not exceed the noise levels in Table H28.6.2.1.1 at a notional boundary from any dwelling that existed at the 1 January 2001 outside the Special Purpose – Quarry Zone.

Table H28.6.2.1.1 Noise levels	
Times	Noise levels
7am-9pm, Monday to Friday	L <sub>Aeq</sub> 55dB
7am-4pm, Saturday	L <sub>Aeq</sub> 55dB
All other times and on public holidays	L <sub>Aeq</sub> 45db L <sub>Afmax</sub> 75dB

#### H28.6.2.2. Vibration and blasting

- 1) Noise created from the use of explosives must not exceed a peak overall sound pressure of 128dB L<sub>zpeak</sub>.
- 2) The measurement of blast noise (air blast) and ground vibration from blasting must be measured at the notional boundary of a dwelling that existed at 1 January 2001.
- 3) Vibration generated by blasting shall be measured within a building in accordance with Appendix J of Part 2 of Australian Standard AS 2187 2006.
- 4) All blasting is restricted to:
  - a) 9am-5pm, Monday to Saturday;
  - b) an average of two occasions per day over a calendar fortnight; and
  - c) except where necessary because of safety reasons.
- 5) Blasting activities must be controlled to ensure any resulting ground vibration does not exceed the limits set out in German standard DIN 4150- 3 1999: Structural vibration – Part 3 Effects of vibration on structures when measured on the foundation in the horizontal axis on the highest floor of an affected building.

A siren must be used prior to blasting to alert people in the vicinity

#### Comments

It is reported '*Stage 2 will be a continuation of the Stage 1 quarry activities. No new plant or activities are proposed.*' Therefore, I agree any change in noise effects will be due to the specific locations of the plant relative to the closest or most exposed notional boundaries



and, the number of truck trips.

A brief description of Stage 2 quarry activities is provided – this looks representative and is adequate to predict noise (and vibration) levels. This includes an increase in truck trips (in and out) from the consented 50 truck trips (i.e. 100 movements) to 94 truck trips (i.e. 188 movements). It is important to note the consented two truck trips between 6.30am and 7am does not change (i.e. when the permitted night time noise level applies).

It is also worth emphasising that proposed quarry activities will not change from Stage 1 consented operating hours and that no quarry activities (except for the two truck trips) or overburden removal will occur before 7am, Monday to Saturday.

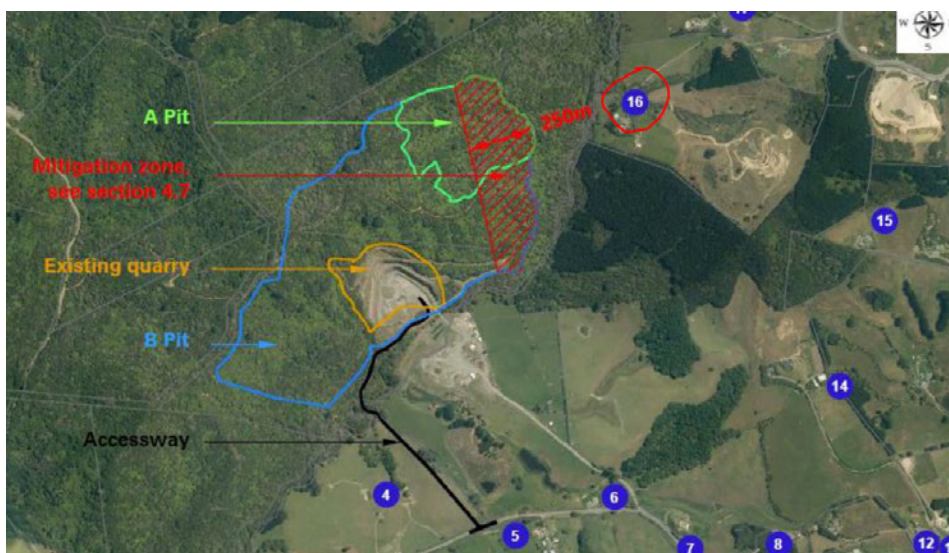
Affected receivers (i.e. sites with notional boundaries) are correctly identified, noting that noise limits only apply to dwellings that existed at the 1 January 2001 (as mentioned above).

Noise rating levels are predicted using recognised noise modelling software. Modelling inputs and assumptions appear representative, for example, sound power data for various plant as set out in Table 2.

Comments on noise duration and special audible characteristics are considered appropriate.

I agree predicted noise rating levels represent a conservative, worst case scenario (i.e. quarry plant operating simultaneously and within in a relatively confined location thereby creating cumulative noise effects).

In my opinion the predicted noise rating levels set out in Table 3 are representative and demonstrate compliance with the daytime permitted noise level of 55 dB LAeq. As reported, specific mitigation is not required to enable compliance except for 782 Haruru Road (site 16) as highlighted below:-



Predicted noise rating levels for 782 Haruru Road (site 16) assumes implementation of specific mitigation measures as recommended as outlined in 4.7. I do not anticipate any practical issues with the implementation of these measures which will be included in the Noise and Vibration Management Plan.

The assessment also comments on predicted noise level changes between consented Stage 1 and proposed Stage 2. The extent of noise level change is quantified in Table 4 and ranges from 0 to +9 dBA. I have highlighted the two sites predicted to be exposed to a noise level increase of >3 dBA:-

**Table 4. Comparison between the Noise Levels of Stages 1 and 2**

Address	Report Reference		Predicted Levels, dB L <sub>Aeq</sub>				Change due to S2
	Stage 1	Stage 2	Stage 1			Stage 2	
			Quarry Only	Trucks Only	Sum <sup>1</sup>		
306 Pebble Brook Rd	1	1	NA <sup>2</sup>	20	NA <sup>2</sup>	46	NA <sup>2</sup>
305 Pebble Brook Rd	2	2	40	21	40	46	+6
251 Pebble Brook Rd	3	3	47	27	47	50	+3
220 Pebble Brook Rd	B	4	52	38	52	55	+3
175 Pebble Brook Rd	4	5	49	48	52	53	+1
170 Pebble Brook Rd	5	6	48	48	51	53	+2
144 Pebble Brook Rd	A	7	44	46	48	50	+2
124 Pebble Brook Rd	6	8	42	37	43	45	+2
101 Pebble Brook Rd	7	9	37	44	45	47	+2
96 Pebble Brook Rd	8	10	37	42	43	45	+2
78 Pebble Brook Rd	9	11	36	46	46	46	0
72 Pebble Brook Rd	10	12	36	37	40	41	+1
68 Pebble Brook Rd	11	13	35	46	46	49	+3
70 Pebble Brook Rd	12	14	43	26	43	43	0
66 Pebble Brook Rd	13	15	35	22	35	37	+2
782 Haruru Rd	14	16	46	19	46	55	+9
778 Haruru Rd	NA <sup>3</sup>	17	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	53	NA <sup>3</sup>

1. When summing noise from different activities, it is the noise energy that is added together rather than the noise levels. As the ear does not respond to noise energy in a linear fashion, the two levels cannot be summed arithmetically. In other words, 50dB + 50dB ≠ 100dB. Instead, noise levels are added together logarithmically, meaning 50dB + 50dB = 53dB.

2. Noise to this site was not reported as it is the quarry manager's dwelling.

3. This dwelling was added to the Stage 2 analysis due to its proximity to Pit A.

The subjective response to noise level changes are as reported and are summarised below:-

Change in dB (increase)	Subjective response
1 – 2 dB	Imperceptible change
3 – 4 dB	Perceptible change
5 – 8 dB	Noticeable change
9 – 11 dB	Twice as loud
>12 dB	More than twice as loud

In regard to blasting noise and vibration, given the setback distances to neighbours (i.e. >200m) and based on my experience with reviewing blasting associated with quarries on other sites, I agree blasting activities can be managed to enable compliance without any practical difficulty.

Trucks driving on Pebble Brook Road are not subject to any decibel levels or requirements in the AUP-OP. Trucks driven on public roads is a permitted activity. However, as neighbours typically express concerns about the number and frequency of trucks driving pass their dwellings, a brief assessment is included.

Although almost a doubling in truck trips is proposed I agree that that truck noise levels when assessed in terms of recognised traffic noise methods (i.e. NZS 6806:2010), that truck noise will continue to be at reasonable level for dwellings located close to the road.

In my opinion, the assessment demonstrates the objectives, policies and standards set out in H28 Special Purpose – Quarry Zone will be met.

The noise assessment includes recommended conditions from Stage 1 conditions and two new conditions. The applicant proposes conditions specific noise and vibration in Appendix 25 namely:-

- C6 (p) – Noise and Vibration Management Plan
- C59 & C60 – Noise and Vibration Management plan content
- C74 – operational noise level (i.e. permitted noise levels set out in H28.6.2.1. Noise)
- C75 – blast noise and vibration requirements
- C76 – broadband reversing alarms only
- C98 & C99 – noise and vibration monitoring

I generally support the proposed conditions. The only amendment is to C60 where the following addition is suggested:-

*(f) The specific noise mitigation measures to enable compliance at 782 Haruru Road in accordance with the Assessment of Noise Effects dated February 2025 by Hegley Acoustic Consultants (referenced in condition 1).*

No new conditions are recommended.

Overall, I agree with the assessment, methodology and conclusions in the report.

Regards,

Andrew Gordon | Senior Specialist  
Contamination, Air & Noise Team | Specialist Unit