BEFORE THE COMMISSIONERS APPOINTED ON BEHALF OF CENTRAL OTAGO DISTRICT COUNCIL

Under	The Resource Management Act 1991 (the **Act**)
In the Matter	of Resource Consent Application RC250077 for the purpose of mining at Sandy Point, Queensberry
Between	**AWA KOURA MINING LIMITED** **Applicant**
And	**CENTRAL OTAGO DISTRICT COUNCIL** **Territorial Authority**

BRIEF OF EVIDENCE OF BRENDON SHANKS (NOISE)

DATED 13 OCTOBER 2026

GALLAWAY COOK ALLAN LAWYERS
Phil Page/Hannah Perkin
phil.page@gallawaycookallan.co.nz
hannah.perkin@gallawaycookallan.co.nz

PO Box 143
Dunedin 9054
Ph: (03) 477 7312
Fax: (03) 477 5564

Introduction:

1. My full name is Brendon John Shanks. I am an associate at Marshall Day Acoustics (MDA). MDA is a specialist acoustics consultancy of about 100 professional acoustics consultants, founded in 1981, with offices in New Zealand, Australia, Spain, and France.

2. I hold the qualifications of degrees of Bachelor of Science (Physics) and Bachelor of Music from the University of Otago. I am a member of the Acoustical Society of New Zealand and the Institute of Acoustics (UK). I have 18 years' experience as an acoustics consultant. I have experience on mine, quarry, and landfill projects throughout the UK and New Zealand, including in the Central Otago District.

3. Although this is not an Environment Court hearing, I have read and agree to comply with the Code of Conduct for Expert Witnesses (Environment Court Practice Note 2023). I confirm that the opinions that I express in this evidence are on matters within my expertise except where I state that I have relied upon the information from other individuals or sources.

Scope of Evidence

4. The predicted noise level and noise assessment have been prepared by my colleague, Juan Gavaria. I have provided technical input to the noise model, and I have reviewed the noise assessment and supplementary information prepared by MDA as part of the application process. I have visited the application site and surrounding area.

5. In preparing this evidence I have read and familiarised myself with:

    - Awa Koura Mining Ltd application and AEE (dated 5 December 2025)

    - MDA Noise Assessment report (Rp 001 20250974)

- MDA Response to RFI (Lt 002 20250974)
- Styles Group Peer review (Review of noise effects, dated 24 September 2026)
- Section 42A Planners report (s42A report, dated 24 September 2026)

6. The scope of my evidence is limited to assessing the acoustic effects of the proposed resource consent and mitigating actions to reduce any adverse noise effects.

7. My evidence will address the following matters:

- Proposed mining details;
- Assessment criteria;
- Existing noise environment
- Predicted noise levels
- Potential noise effects;
- Mitigation measures;
- Comparison to other mining activities in the District;
- Response to submitters; and
- Comments on s 42A report and Council evidence.

Summary of findings

8. The predicted noise levels from the Awa Koura Mining operation are consistent with the permitted noise limits contained in the Central Otago District Plan. Noise levels will be noticeably lower than these limits at any individual receiver for the majority of the proposed three-year life span of the mine.

9. The Section 42A author has concluded that the predicted noise levels are "*potentially unreasonable*", apparently based on the noise peer review that suggests mining activity is not anticipated in the Rural Resource Area (RRA). Whether this activity is anticipated in the RRA is a planning matter which is addressed by Mr Sycamore.

10. Due to the relatively low levels of ambient noise in some of the surrounding area, mining noise would be clearly audible above the background sound at some receivers for varying periods of time.

11. I do not consider that audibility of a noise source alone is a suitable test of reasonableness in the RRA. I consider that the permitted noise limits provide an indication of what is reasonable for an activity that is anticipated in the rural environment.

12. In this case the noise level falls within the permitted activity standard, and given the character and level of the noise, together with the restriction to daytime hours and the ultimately transitory nature of the activity, I consider the noise to be reasonable and the effects acceptable.

Proposed activity details

13. The proposed activity includes alluvial gold mining the western river terrace to depths of 3-4m. The activity would work in a zigzag pattern (east to west across the site) moving progressively from south to north over a period of up to three years.

14. The following key items of plant and equipment proposed for the operation have been included in the noise assessment:

    - Floating wash plant (trommel/screen) and 2 x excavator (55 tonne)
    - 3 x Excavators (20-50 tonne)
    - 2 x Dump trucks (30 tonne)
    - 1 x Bulldozer (23 tonne)
    - Ancillary pumps

15. Mining activity (being the use of the equipment modelled in paragraph 15 above) on the site is proposed on Monday to Friday between the hours of 8am and 5pm, i.e. for up to 9 hours per day. Those hours of operation are 1 hour per day less than originally proposed, to accommodate Mr Styles' recommended condition. No work is proposed on the site during the night-time or on weekends or public holidays.

Existing noise environment

16. MDA has conducted noise monitoring for a period of seven days at a position that is representative of receivers on the western side of the Mata-au/Clutha River. The daytime noise levels ranged between 46 and 52 dB $L_{Aeq\ (15\ hour)}$ with periods of adverse weather excluded. Road traffic noise from State Highway 6 (SH6) generally controlled the measured noise levels at this location.

17. I did not conduct long term noise monitoring on the eastern side of the Mata-au, but the noise assessment indicated that anticipated noise levels at dwellings along River Ridge Road are likely to be lower than the levels measured during unattended monitoring, due to the increased distance from SH6. While these dwellings are in turn closer

to SH8A, this road carries roughly half the traffic that SH6 carries and therefore generates around 3 decibels less noise.

18. I have subsequently conducted attended noise measurements at positions that are representative of dwellings on River Ridge Road, on 9 October 2026, between 11:30am and 4:15 pm. The measured L_{Aeq} noise levels were 43 – 46 dB L_{Aeq} and background noise levels were 35 – 42 dB L_{A90}. Noise levels were controlled by distant road traffic, intermittent aircraft, and natural sounds (e.g. birds and the river).

Predicted noise levels

19. MDA has predicted noise from the proposed mining operation using a 3D computer noise model of the site and surrounding area (SoundPlan 9.1). The noise model has used industry standard sound propagation calculations.

20. I wish to make clear that our noise modelling is based on a worst-case operational scenario where noise sources are operating at ground level, rather than in an excavated pit. During the mining operation, the pit depth will provide some shielding to receivers, which will result in lower noise levels than indicated in our modelling. Furthermore, the modelled scenario with all equipment operating simultaneously is only expected to occur for 2 - 3 days per month and the bulldozer is no longer anticipated as part of the operation. During other periods, when fewer sources are operating, I expect that noise levels will reduce by 1 – 2 decibels.

21. MDA has predicted the noise from the proposed activity at seven positions throughout the three-year lifespan of the mine. The model outcomes were provided in noise contour figures in our response to a request for further information[1]. Figure 1 below shows the location of all modelling scenarios. The noise model also predicted detailed noise

[1] Lt 002 20250974, dated 24 June 2026

levels at the notional boundary of the nearby existing dwellings and the consented building platform at 67 River Ridge Road.

22. The notional boundary is defined in the CODP as "*a line 20 metres from part of any living accommodation or the legal boundary where this is closer to the living accommodation*". This is the typical assessment position for noise received in the rural environment.

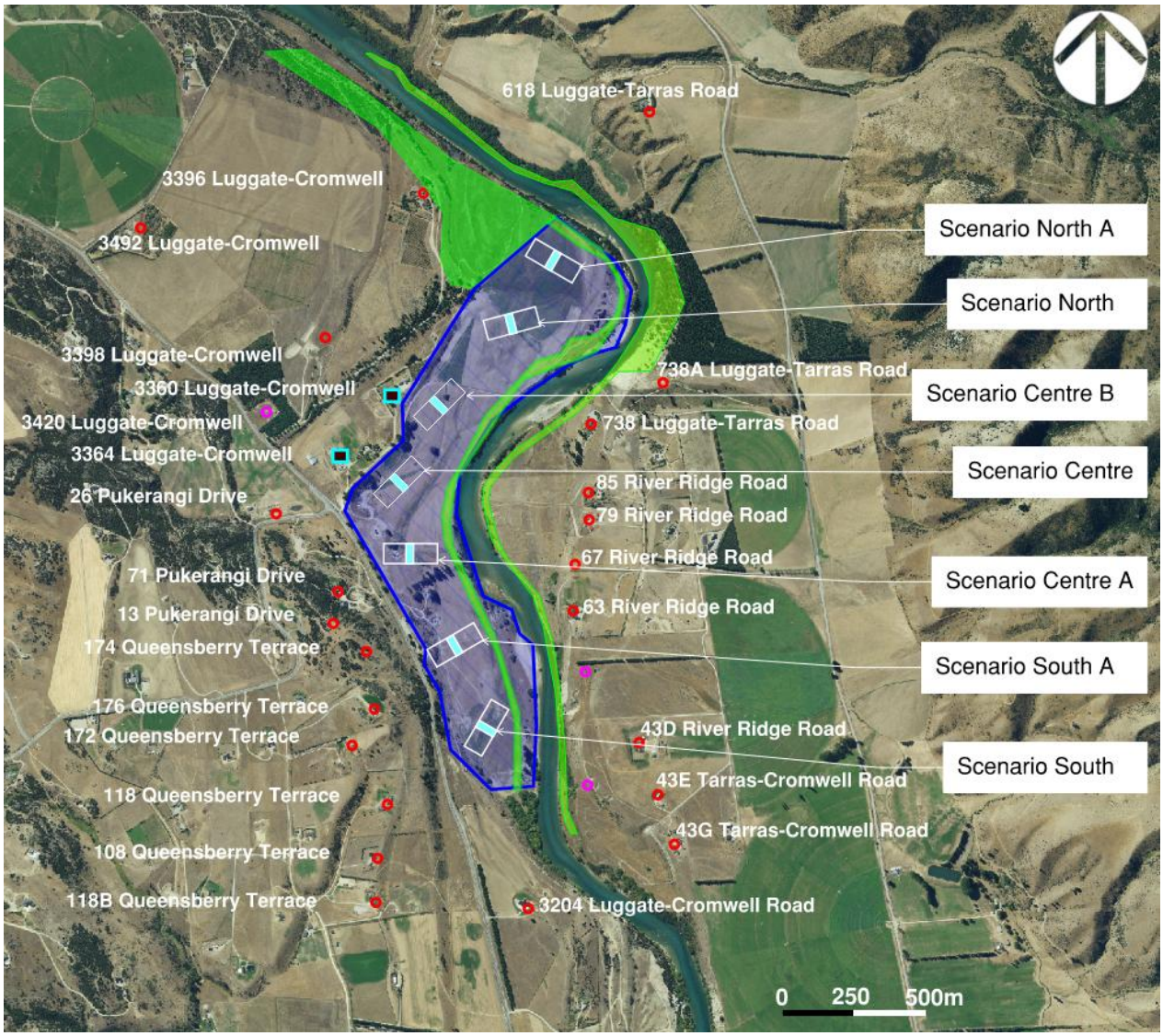


Figure 1: Noise modelling locations

23. The proposed mining activity is located in the Central Otago District. However, the surrounding receivers include dwellings located in the Central Otago District and the Queenstown Lakes District. The Central

Otago District Plan (CODP) noise limits are expressed using the L_{A10} metric. This metric is now outdated and current best practice as described by the most recent versions of NZS 6801[2] and NZS 6802[3] is to use the equivalent continuous sound pressure levels metric or L_{Aeq}.

24. The Queenstown Lakes District Plan (QLDP) noise limits use the L_{Aeq} metric. For the purposes of assessing compliance with the CODP and QLDP noise limits, we have assessed noise levels using both the L_{A10} and L_{Aeq} metrics. When discussing potential noise effects, I have used the more current L_{Aeq} metric as this is also used in the relevant guidelines that discuss such effects.

25. To clarify, the district plan daytime noise limits for the surrounding areas are:

- CODC 55 dB L_{A10} (07:00-22:00)
- QLDC 50 dB L_{Aeq} (08:00-20:00)

26. The figures generated in our assessment report and supplementary letter show the predicted L_{A10} noise level during activity on the site. Rule 12.7.4 b. of the CODP requires that noise is only averaged over periods when the "*sound of interest*" is present. On this basis, we have presented the predicted noise levels with no averaging applied. The predicted noise levels comply with the daytime noise limit of 55 dB L_{A10} at assessment positions in the Central Otago District and 50 dB L_{Aeq} at assessment positions in the Queenstown Lakes District.

27. Based on measurement and assessment of similar mining activities, I do not consider that the noise sources involved will contain special audible characteristics (SAC) that would require adjustment in accordance with NZS 6802. Any such characteristics would only be

[2] New Zealand Standard NZS 6801:2008 *Acoustics – Measurement of environmental sound*
[3] New Zealand Standard NZS 6802:2008 *Acoustics - Environmental Noise*

likely in the event of poorly maintained equipment resulting in unusual characteristics, for example squeaks or screeching. This should be avoided through implementation of a noise management plan for the operation.

Potential noise effects

28. When assessing the potential noise effects from the proposed mining activity I have considered compliance with the underlying noise limits in the CODP and QLDP, guidance from relevant standards, guidance on potential onset of health effects, and comparison with the existing noise environment.

29. As detailed above, I predict that noise from the mining operation can comply with the daytime noise limit at all existing assessment positions.

30. MDA has conducted monitoring of the existing ambient environment near the site. The noise assessment includes full details of the noise monitoring. This shows that existing noise levels on the western side of Mata-au/Clutha River were 46-52 dB L_{Aeq}, which is within the same range as the worst case predicted noise levels from the mining operation.

31. The noise assessment report indicated that the anticipated existing noise levels on the eastern side of Mata-au/Clutha River will be less than the levels measured at the monitoring location, due to the increased distance from SH6. I have since conducted attended noise measurements in locations representative of this area and noise levels ranged between 43 and 46 dB L_{Aeq}.

32. To assist in assessing the potential effects of the mining operation, I have included a table of predicted L_{Aeq} levels during the operational activity. I have separated the receivers based on which side of the Mata-au/Clutha River they are located.

33. The table presents the seven modelling scenarios detailed in Figure 1, moving from south to north up the site. The modelling locations are relatively evenly spaced out, so each location can be considered representative of the mining activity for around five months. I have colour coded the table in five decibel increments to indicate the progression of noise levels at each dwelling throughout the three-year life span of the mine.

Table 1: Predicted noise levels – approximately 5 month blocks

Receiver	Predicted noise level (dB L_{Aeq})						
	South	South A	Centre A	Centre	Centre B	North	North A
Dwellings near SH6 – west of Mata-au/Clutha River							
13 Pukerangi Drive	34	41	53	52	43	38	35
26 Pukerangi Drive	31	36	41	48	42	35	35
108 Queensberry Terrace	35	35	31	30	27	25	23
108 Queensberry Terrace	30	31	28	28	26	24	22
118 Queensberry Terrace	41	38	30	31	30	28	25
118A Queensberry Terrace	32	33	30	30	27	25	23
118B Queensberry Terrace	36	36	30	31	29	26	24
170 Queensberry Terrace	40	30	26	27	28	28	26
172 Queensberry Terrace	41	31	29	30	32	29	26
174 Queensberry Terrace	48	50	47	44	39	35	33
176 Queensberry Terrace	24	36	40	38	38	34	32
3204 Luggate-Cromwell Rd	42	37	32	31	33	31	29
3396 Luggate-Cromwell Rd	29	28	31	32	37	45	50
3398 Luggate-Cromwell Rd	31	35	38	42	50	43	36
3420 Luggate-Cromwell Rd	29	33	38	41	45	38	33
3492 Luggate-Cromwell Rd	24	26	29	30	32	30	29
Dwellings east of Mata-au/Clutha River							
43D River Ridge Rd	44	39	34	34	30	29	27
43E River Ridge Rd	42	37	32	31	30	28	26
43G River Ridge Rd	45	34	30	29	27	24	21
63 River Ridge Rd	46	52	46	45	41	34	31
67 River Ridge Rd	43	50	48	47	45	43	39
71 Pukerangi Drive	31	40	49	48	41	36	34
79 River Ridge Rd	35	46	46	46	45	45	41
85 River Ridge Rd	34	45	45	45	46	46	42
618 Luggate-Tarras Rd	23	26	27	28	31	35	40
738 Luggate-Tarras Rd	32	37	44	44	47	50	41
738A Luggate-Tarras Rd	30	34	39	39	37	27	22

≤ 40 dB L_{Aeq}	41 – 45 dB L_{Aeq}	46 – 50 dB L_{Aeq}	> 50 dB L_{Aeq}

34. Table 1 shows that predicted noise levels are greater than 50 dB L_{Aeq} at two receiver positions (13 Pukerangi Drive and 63 River Ridge Road). At 63 River Ridge Road, the predicted noise levels are greater than 50 dB L_{Aeq} for one of the modelling locations and drop down to 46 dB L_{Aeq} for the locations either side. This indicates that noise levels are likely to be greater than 50 dB L_{Aeq} for up to 5 months.

35. Based on the existing ambient noise environment, I consider that the highest predicted noise level at 63 River Ridge Road (52 dB L_{Aeq}) is likely to be clearly audible above the background noise and road traffic during the period when mining is at its closest under a wide range of meteorological conditions, but not at all times.

36. At 13 Pukerangi Drive, the predicted noise levels are greater than 50 dB L_{Aeq} for two of the modelling locations and drop down below 45 dB L_{Aeq} for the locations either side. This indicates that noise levels are likely to be greater than 50 dB L_{Aeq} (52-53 dB L_{Aeq}) for around 10 months but will be significantly lower before and after that period.

37. The highest predicted noise level at 13 Pukerangi Drive (53 dB L_{Aeq}) is likely to be audible above the background noise, but at a similar noise level as road traffic for parts of the day.

38. For clarity, both of these properties are within the Central Otago District. The relevant noise standard in the CODP is 55 dB L_{A10}. This standard will not be breached by the activity.

39. At all other receivers, the predicted levels are no greater than 50 dB L_{Aeq} throughout the progression of the mining operation. Based on the ambient noise monitoring, noise levels greater than 45 dB L_{Aeq} would be at a similar level to the existing road traffic levels for the receivers on the west. At receivers to the east of the river, the highest predicted noise levels would be around 5 decibels above the existing L_{Aeq} level

Assessment criteria

40. As detailed above, we predict that noise levels can comply with the relevant district plan daytime noise limits assuming a worst-case scenario where all equipment is operating at ground level.

41. The determination of noise effects is not solely a matter of meeting the District Plan standards. However, I consider that where the activity is anticipated in the area, the District Plan standards provide a strong guide to what level of noise should be expected, regardless of the existing environment. I do not have an expert opinion about whether mining or similar activity is an anticipated Rural Resource Area (RRA), as this is a planning matter that has been addressed by Mr Sycamore in his evidence. I rely on Mr Sycamore's evidence that mining is an activity that is anticipated in the RRA, rather than urban setting.

42. Several of the objectives and policies for the RRA reference the need to consider the effects of noise or to maintain rural amenity. These have been addressed by Mr Sycamore in his evidence. In my capacity as a noise expert, I have considered the predicted noise from the activity and effects on amenity below, and in greater detail in responding to the s42A report.

43. Policy 12.4.2 - Noise of the CODP provides the following list of items for consideration to determine the suitability of noise generating activities:

> *12.4.2 Policy – Noise*
>
> *To determine the suitability of noise generating activities in any given locality by having regard to:*
>
> *a) The specific characteristics and amenity values of the locality from which the noise originates, and*
>
> *b) The sound pressure level of the proposed activity, and*

c) The frequency that the noisy activity takes place, and

d) The length of time that the noise continues, and

e) Any special characteristics of the noise,

to ensure that the adverse effects of noise on other activities and the natural and physical resources of the locality (including cumulative effects) reflect standards acceptable to the community.

44. In assessing item a) above, I consider that the permitted noise levels must be given regard when considering the amenity values of the area. As discussed above, I consider that the District Plan standards provide a strong guide to what sound pressure level should be considered as a standard that is acceptable to the community.

45. The frequency and length of time of noisy activity - items c) and d) - can be considered together. The proposed activity would generate noise that is regular and continuous. However, the hours of operation have been chosen to minimise disruption to amenity at surrounding dwellings. Further, as demonstrated in Table 1, noise levels at any one receiver will be relatively low for a majority of the three-year life span of the mine.

46. Mr Sycamore's evidence demonstrates that mining is a primary production activity and is anticipated in the RRA. I consider that the character of the noise generated by the proposed mining activity would be similar to typical activity in the rural environment. The primary noise sources include the screen and diesel-powered machinery such as excavators, bulldozer, and trucks. At a distance, the character of this noise is likely to be similar to typical machinery used in the rural environment, such as excavators and tractors, or in the numerous consented shingle quarries in both CODC and QLDC. No special characteristics are anticipated from the noise.

47. The MDA noise assessment refers to guidance from the World Health Organisation (WHO)[4] which state that daytime noise levels up to 55 dB L_{Aeq} will provide reasonable protection of health and amenity for residential use. I consider that this provides useful context when assessing if noise is likely to be unreasonable, nothing that the highest predicted noise level at any receiver in the assessment is 53 dB L_{Aeq}.

Mitigation measures

48. I have considered potential mitigation measures to reduce noise effects to the nearby receivers, including mitigating machinery, using earth bunds to block line of sight to receivers, and timing of activity. Where practicable, these have been included in the assessment.

49. We have based our assessment on measurements of typical mining equipment that is expected to be used on this site. Loading and screening process includes tumbling material through the screen and requires openings. It is not practical to significantly mitigate this activity with the proposed machinery. Quieter methods of screening may be available. However, I understand that these are not practicable for operational reasons. Regular maintenance of machinery would be required as part of an operational noise management plan, to ensure that equipment is not generating unnecessary levels of noise or special audible characteristics.

50. Blocking line of sight to sources would reduce noise levels at receiver locations. We have considered the use of localised bunds near the mining area. However, the receivers to the east of the site are elevated above the proposed mining site, so a significant bund height would be required to block line of sight when sources are near ground level. Due to the continually moving nature of the extraction activity, bunding of this scale is not practicable from an operational perspective.

[4] World Health Organization (WHO) Guideline Values for Community Noise (Berglund and Lindvall, 1999)

51. The timing of mining activity (8am-5pm on weekdays) has been proposed to avoid periods where people are most likely to be utilising outdoor areas for amenity e.g. evenings after work, whilst still allowing the activity to keep a relatively short life span (three years).

Comparison to other mining activities in the District

52. In assessing what level of noise is considered reasonable from mining activity in the CODP RRA, I have reviewed the noise limits for similar activities in the area. The most useful comparison is with quarrying activities, of which there are several in similar areas of the Mata-au/Clutha River valley. The table below provides a summary of quarrying activities in the district.

Table 2: Quarrying activities

Activity	Permitted noise limits
Road Metals Queensbury Quarry[5]	53 dB L_{Aeq} (7am-10pm)
Amisfield Quarry, Cromwell[6]	55 dB L_{A10} (7am-7pm, Mon to Sat)
Parkburn Quarry, Pisa Moorings[7]	55 dB L_{A10} (7am-10pm)

53. The noisy activity at these quarries typically includes crushers/screening plant that operates at a continuous noise level, as well as loaders, trucks, and excavators at the extraction face. This activity has a similar character and continuous nature to the proposed mining activity and is likely to be indistinguishable for receivers at a distance.

54. All of the activities in Table 2 above have adopted the CODP RRA noise limits for daytime operation. In the case of the Road Metals Queensbury site, the limit has been converted from L_{A10} to L_{Aeq} and adjusted to reflect the equivalent level for this metric.

[5] RC 250044.
[6] RC 150052.
[7] RC 070216.

55. Table 2 helps to inform a judgment about what the anticipated noise environment arising from primary production in the RRA is.

Response to submitters

56. Several submitters have raised concerns around potential noise effects from the proposed activity. These general comments have been considered in the s42A report along with additional detail on specific noise matters. I have addressed these noise matters in the following section.

Comments on Section 42A Report and Peer Review

57. I have reviewed the section 42A (s42A) report along with the peer review prepared by Mr Styles. As these reports address the same issues, I respond to both in this section.

58. I note that Mr Styles agrees that our noise modelling has used appropriate methodology and is a conservative approach. He also agrees that the predicted noise levels comply with noise limits in the CODP and QLDP noise rules at the notional boundary of existing dwellings (except where written approval has been provided).

59. Mr Styles expresses the opinion that the noise rule for the rural zone does not provide for or anticipate ongoing or constant noise from industrial processes and therefore that noise from mining may be distinct from other noise sources within the RRA, which he considers are likely to be seasonal and intermittent.

60. Whether mining activity is considered an "*industrial process*" or whether this activity is provided for or anticipated in the RRA is a planning matter that is addressed by Mr Sycamore.

61. Mr Styles considers that the proposed operation has the potential to detract from the amenity in the area. The s42A author has accepted Mr

Styles' opinion on this matter and has taken this further to conclude that the noise effects are "*potentially unreasonable*".

62. The s42A author has indicated that greater assessment of the "*duration, continuity and character of the noise, and the context of the receiving environment*"[8] is required to determine if effects are acceptable.

63. I have provided further detail of the character of noise from the proposed activity in paragraph 47 of this evidence. Mr Styles has confirmed that he does not anticipate there would be any noise sources that would be considered to contain a special audible characteristic (SAC) in accordance with NZS 6802[9].

64. With regard to the duration, Table 1 of this evidence shows the likely duration of different noise levels as the mine activity moves up the site. The s42A author has characterised the noise from the activity as "*constantly at a high level over an extended duration (10 hours a day, for three years, while the mine progresses across the site)*". This characterisation does not accurately describe the effects on any one receiver. Due to the progress of the mine, no single receiver will receive high levels of noise for the full three-year period. This is demonstrated by the predicted noise levels in Table 1. I also note that the hours of operation have been reduced to 9 hours a day, in line with Mr Styles' recommendation.

65. With respect to the context of the receiving environment, I have provided additional information on the existing noise environment at the receivers on the eastern side of the Mata-au/Clutha River. The measured noise levels generally confirm the assumptions made by Mr Styles in his peer review. I consider that the existing noise levels at the dwellings near the proposed mine site are typical for the rural

[8] Section 42A report, paragraph 71
[9] NZS 6802:1991 Assessment of Environmental Sound

environment, with periods of elevated noise and relatively low background noise levels. It is likely that similar noise levels occur at dwellings throughout the RRA that are similar distances from a state highway. The context of the receiving environment should also consider the noise level that is currently permitted i.e. 55 dB L_{A10} during the daytime.

66. Mr Styles has commented that he expects that "when mining noise levels are at or above 45-50 dB L_{A10}, the mining noise will be dominant and mask many of the natural sounds in the environment, including the Clutha River and birdsong". In section 9.4 he states that "*I consider that the proposal has the potential to detract from the acoustic amenity of the area for the duration that the activity generates noise levels above approximately 45-50dB L_{A10}*…". I note that the s42A report has quoted these sections but has changed the noise metric from L_{A10} in Mr Styles' report to L_{Aeq} in the s42A report, without adjusting the levels.

67. I agree with Mr Styles that mining noise will mask noise from the river, distant birds and road traffic at times. However, I do not consider that it is appropriate to conclude that noise that masks distant bird song or noise from a river is unreasonable – particularly for dwellings that are more than 100m from the river. I consider that this is an inappropriate standard to apply when considering effects on amenity. Mr Styles alludes to this in his footnote 7, where he states that he is "*not suggesting in this section that a sense of peacefulness is a reasonable expectation*".

68. The range of 45-50 dB L_{A10} (which equates to 43-48 dB L_{Aeq}) appears to have been used to define high levels of noise in Mr Styles assessment and the s42A report. Mr Styles refers to some receivers being exposed to "*higher noise levels for more than a year and potentially up to two years*." The section 42A report states that "*central receivers' will receive the highest noise levels of noise for the longest duration (up to two years)*".

69. I agree that some receivers are expected to receive noise levels greater than 43 dB L_{Aeq} for up to two years, this is consistent with the predicted noise levels shown in Table 1 of this evidence. However, I disagree that a level of 43 dB L_{Aeq} should be characterised as high during the daytime in a rural environment, regardless of whether it is a continuous noise source. The level 43 dB L_{Aeq} is similar to the existing background noise level (L_{A90}) measured near the dwellings along SH6, and noticeably lower than the existing average level (L_{Aeq}), and at the lower range of average noise levels for receivers east of the Mata-au/Clutha River.

70. While Mr Styles does not consider that compliance with the noise limits necessarily represents a reasonable level of noise, he does not state that either the District Plan Standards or the proposed activity noise levels are unreasonable. Nor does he confirm what he would consider a reasonable noise level for mining activity to be in the area. The conclusion that noise levels are unreasonable is reached by the s42A author without analysis.

71. Based on the peer review of Mr Styles, the s42A author has concluded that, mining activity noise levels above 45 dB L_{A10} (43 dB L_{Aeq}) are "*potentially unreasonable*", "*noticeably adverse*" and would "*potentially go beyond an acceptable threshold*" because the activity is not anticipated in the environment. This conclusion is reiterated in the assessment of objectives and policies, which are assessed "*based on the conclusion that noise effects are unreasonable for surrounding properties and recreational users*".

72. In section 9.4 of the peer review report (page 9) Mr Styles states that the RRA "*does not provide for or anticipate ongoing constant noise from industrial processes (or processes of the same character) that affect land beyond its own site boundaries*". In my view, mining/quarrying noise should be anticipated as part of the amenity characteristics in the RRA. However, I regard resolving that difference a matter of planning policy, rather than acoustic opinion. Again, I defer

to Mr Sycamore to address whether mining activity is anticipated in the area.

73. I consider that the threshold of what is considered unreasonable by the s42A author has been set unrealistically low. If this approach were to be applied to similar activities in the area, it is likely that many activities including mining or quarrying would be not possible in the rural environment. Mr Sycamore will discuss in his evidence the implications for this approach in the wider region. As detailed in paragraph 53-56 of this evidence, this is not the approach that has been taken with similar activities in the region, where daytime noise limits of 55 dB L_{A10} (or the equivalent 53 dB L_{Aeq}) have been adopted for quarrying activity.

74. Some concern has been raised about noise effects on publicly accessible areas along the river, both on the banks and on the river itself. In the assessment of objectives and policies, the s42A author concludes that "*The proposal will have significant effects on recreational users of the reserve areas adjacent to the site, and users of the river (for example kayakers), for the three-year duration of the consent term*."

75. I agree that noise levels immediately adjacent to the mining activity are expected to exceed 60 dB L_{Aeq} on the river and riverbank and that this would detract from amenity for users immediately adjacent to mining activity. However, this will be localised to the area adjacent to activity, which will move continuously throughout the mine lifespan. Furthermore, users of the river, such as kayakers will be transient and will typically move past the mining activity in a few minutes. Furthermore, I do not consider that there is an expectation of no noise for users of the river. For example, I consider that noise levels from mining activity would be considerably less intrusive than a passing jet boat.

76. Users of the riverbank can choose to avoid the area with elevated noise levels immediately adjacent to the mining activity. In this way, the

proposed activity is similar to typical rural activities that may generate noise over an isolated area as kayakers pass, or users of the riverbank may choose to avoid if present.

77. Fishers angling for trout along the Clutha River during the dawn or evening rise or at weekends will be largely protected by the 8am-5pm weekday operation hours.

78. The s42A author refers to section 16 of the RMA with respect to noise generated at the river and riverbank. Section 16 requires that the applicant adopt the best practicable option (BPO) to ensure that noise emissions do not exceed a reasonable level.

79. I am not able to comment on all aspects of whether the BPO has been adopted, as this would include other considerations, such as operational realities and cost. However, I understand that developing bunds that would block line of sight to mining equipment is not practicable due to the continuously moving nature of the mining activity.

80. Given the relatively short-term duration of elevated noise at any particular area of the river or riverbank, I consider that the test of what is reasonable is different than for fixed receivers. This is reflected by the lack on noise limits for these areas, since District Plan limits are measured at the notional boundary of dwellings. I consider that the predicted noise levels are reasonable for transient (non-fixed) users, particularly given the limited duration of the activity.



Dated 13 October 2026
B Shanks