

Name: David Brunton

Address: [REDACTED]

Phone: [REDACTED]

Email: [REDACTED]

Submitter type: Individual

CM-2: Draft noise and vibration metrics standard

1. This is a submission in relation to the CM-2: Draft noise and vibration metrics standard.
2. The submitters are involved in proceedings with Auckland Council and others concerning the correct approach to the assessment of impulsive sound from gunfire.
3. The purpose of the submission is to address apparent confusion in the draft standard in relation to the measurement and assessment of impulsive sound such as gunfire and blasting, which are characterised as a peak sound level (with the descriptor L_{peak}). Impulsive sounds are not properly assessed and measured by applying a rating level expressed in L_{eq} (for a continuous steady sound) or L_{max} in NZS 6802:2008 as implied in paragraph 4 of the draft standard.
4. Paragraph 3 of the draft standard states:
Any plan rule to manage an emission of noise must be consistent with noise measurement methods in the New Zealand Standards listed in table 30: Acoustic New Zealand Standards below.
5. Paragraph 4 of the draft standard states:
*Any plan rule to manage **an emission of noise** must be consistent with the assessment methods in section 6 Rating Level and section 7 LMAX in New Zealand Standard 6802:2008 Acoustics – Environment Noise.*
6. At least as it relates to impulsive sound, paragraphs 3 and 4 of the draft standards appear to be in conflict. This is because for impulsive sound such as gunfire or blasting (impulsive sound being transient sound having a peak level a very short duration, typically less than 100 milliseconds) should be described by the measurement of its peak level as indicated by the descriptor L_{peak} (refer clause 8.6, New Zealand Standard 6801:2008).
7. In comparison, the descriptor for a continuous steady sound is the L_{eq} which is a time average level i.e. L_{eq} is 'a different thing' from the peak level.
8. The assessment and determination of the rating level (as expressed in L_{eq} with adjustments for duration and special audible characteristics) and L_{MAX} in New Zealand Standard 6802:2008 will only be applicable and relevant if the type of sound is generally within the scope of NZS 6801:2008 and NZS 6802:2008.
9. Impulsive sound (gunfire and blasting) is generally outside the scope of NZS 6802:2008 (refer clause 1.2 NZS 6802:2008).
10. An (unintended) implication from the current drafting to the draft New Zealand standard may be a possible interpretation that gun clubs in New Zealand are subject to the assessment criteria requiring the calculation of a rating level (in L_{eq}) and the application of L_{MAX} , when these are not the correct descriptors for impulsive sound.
11. It is submitted that it would not be logical to have a plan rule or draft national standard implying that emission of impulsive sound is to be assessed in a manner consistent (per paragraph 4 of the draft standards) with section 6 Rating Level and section 7 L_{MAX} in New Zealand Standard 6802:2008 Acoustics – Environment Noise – when L_{eq} and L_{max} are not applicable to the assessment of impulsive sound.

It is important to ensure validity of any draft standard that the draft standard not "overreach" the application of a rating level to types of sounds (such as gunfire and blasting) not intended to be addressed by the descriptors L_{eq} or L_{max} .

12. In the New Zealand context in *Brooks v Western Bay of Plenty District Council*, the Environment Court expressly recognised (based on expert evidence) that general amenity noise standards in New Zealand Standard 6802:2008 were not applicable to impulsive noise. ^[1]

Outcome sought

13. Suggested drafting to resolve the conflict would be to amend clause 4 of the draft national standard (CM-2: Draft noise and vibration metrics standard) to read (or to same or similar effect):

Any plan rule to manage an emission of noise must be consistent with the assessment methods in section 6 Rating Level and section 7 L_{MAX} in New Zealand Standard 6802:2008 Acoustics – Environment Noise, provided the emission of noise in question is generally within the scope New Zealand Standard 6802:2008.

14. The submitter requests to be heard in relation to this submission.

Date: 17 August 2018

David Brunton