Before the Independent Hearing Commissioners
appointed by New Plymouth District Council

Under	the Resource Management Act 1991
In the matter of	supplementary evidence for the resource consent application by the New Plymouth Pistol Club Inc for a land use resource consent for the use of a gun range and associated facilities within the General Industrial Zone on the existing site at 228 De Havilland Drive & 1206 Devon Road (LUC24-48583)

Supplementary statement of evidence of Jeremy William Trevathan on behalf of
New Plymouth Pistol Club Inc

Date: 17 June 2026

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INTRODUCTION

1 My full name is Jeremy William Trevathan. My experience and qualifications are outlined in my previous evidence, dated the 4th of May 2026.

2 I have been requested to provide supplementary evidence regarding the possibility of the inclusion of the term "R" in the formula for CNR, based on paragraph 21 of the evidence prepared by Mr Ellerton, dated the 25th of May 2026 where Mr Ellerton stated that:

"*the formula omits the term "R" which relates to the number of rounds per burst. For single shots this would be =1, and the correction would be zero. For rapids. Police training or similar firing styles where several rounds are fired in quick succession then R may be 3 or more. In following the Commissioners suggestion of simplification (community adaption being set at -13) I suggest using R=3. The formula for calculating CNR should be:*
CNR = (Y – A) – 12 +10logN + 10logR + 10logT; Where
- Y is the log average L_{ZPeak} level for all shots over the day;
- A is the degree of community adaption (set conservatively at 13 for no adaption);
- N is the number of shots a day;
- R is the number of rounds per burst (set at 3 in this case, making this term +5 as a constant)
- T is the proportion of day that shooting occurs (time between first and last shot as a proportion of the total hours allowable for that day)".

3 The key difference between the formula proposed by Mr Ellerton and that in the proposed Conditions is the inclusion of the term "R".

RESPONSE

4 As discussed in my evidence in chief, the CNR formula was originally presented in Australian Department of Health National Acoustic Laboratories (**NAL**) Report number 67, dated February 1977 by N. L. Carter[1]. It is correct that the 1977 formula included the variables Y, A, N, T and R. It is also correct that R had not been recommended or discussed in evidence until Mr Ellerton's 25 May 2026 statement.

[1] Carter N.L., (1977). *A Method for Evaluating Community Response to Noise from Military Firing Ranges*. NAL Report No.67.

5 That is because R is not relevant for the New Plymouth Pistol Club. Specifically, of relevance is the original definition of the term 'N' which was:

> N = Number of noise events per day, all events taking place between 7am and 10pm

and the original definition of the term 'R', which was:

> R is the number of rounds fired in each noise 'event'

Based on these definitions, the total number of rounds fired in a day would be N multiplied by R.

6 In this case, it has already been agreed that N will be defined directly as the number of shots fired in a day - which simplifies the formula and achieves the same outcome as the original.

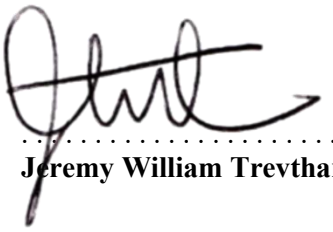
7 Introducing R in the manner suggested by Mr Ellerton would either be double counting, or the definition of N would need to be modified to allow the formula to still operate correctly. That would add complexity, for the same outcome.

8 While it makes no difference, for context I note that R is introduced in the 1977 formula in the context of military ranges where volleys of rounds are intentionally shot simultaneously. From an auditory point of view, "simultaneously" means impulsive sounds within, say, 100 ms of each other which are likely to be perceived by a human as a single noise event. I have reviewed the measurement data for the Club, and observe that this is a very rare occurrence. That is not surprising, as no automatic firearms are used at the Club, and generally a single shooter cannot pull the trigger twice within 100 ms - and it is an unlikely coincidence that two shooters would happen to fire at exactly the same time.

9 As above, even if this was a common feature of the activity at the Club and the CNR formula was expanded to include R (number of rounds fired in each event) and define N as the number of noise events per day, each qualifying volley would be counted as one 'event', and the number of rounds it contained would be captured in R – and the net effect on the calculated CNR would be no change.

10 For these reasons, inclusion of R is not necessary and would introduce unnecessary complexity without affecting the outcome. In my opinion the CNR formula in Condition 32 is appropriate for controlling noise effects and monitoring compliance.

Date: 17 June 2026



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Jeremy William Trevthan